CHILDREN'S GARDENS

HON·MRS·EVELYN CECIL

NY PUBLIC LIBRARY THE BRANCH LIBRARIES
3 3333 02374 2220

J-716 Cecil 6938
Childrens Gardens

REFERENCE
716
C

THE CENTRAL CHILDREN'S ROOM
DONNELL LIBRARY CENTER
20 WEST 53 STREET
NEW YORK, N.Y. 10019

Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

http://www.archive.org/details/childrensgardens00ceci2

CHILDREN'S GARDENS

THIS BOOK IS THE PROPERTY OF THE
PUBLIC LIBRARY
ASTOR, LENOX AND
TILDEN FOUNDATIONS.

MY MOTHER'S GARDEN

CHILDREN'S GARDENS

BY

THE HON. MRS. EVELYN CECIL

(ALICIA AMHERST)

AUTHOR OF 'A HISTORY OF GARDENING IN ENGLAND'

NEW YORK
PUBLIC
LIBRARY

WITH ILLUSTRATIONS

London

MACMILLAN AND CO., LIMITED

NEW YORK: THE MACMILLAN COMPANY

1903

All rights reserved

THE NEW YORK
PUBLIC LIBRARY
693
ASTOR, LENOX AND
TILDEN FOUNDATIONS

First Edition 1902
Reprinted 1903

NEW YORK
PUBLIC
LIBRARY

C716
C

Dedicated

TO

MY DEAR CHILDREN

MARGARET AND ROBERT

NEW YORK
PUBLIC
LIBRARY

PREFACE

THE idea of writing this little book occurred to me because numerous people have frequently asked me, "When did you take up gardening?" and seemed surprised at my reply, that I never remembered being without a garden. The fashion of "taking up" gardening is now so prevalent, that I thought it might be a help to have some simple book that would form a sound foundation of the rudiments of gardening for children and beginners of all ages. I hope this little volume may be fortunate in directing their ideas to the work required to produce bright gardens, and that by pointing out a few of the endless attractions of the pastime, it may increase in the young the taste for practical gardening, which I myself, in common with thousands at all times of life, have found to be one of the surest sources of happiness. This

book is only intended as a sketch, and gives the merest mention in unscientific language of some of the most obvious plants and necessary work in each season of the year. More complete and scientific works should be referred to for following up the threads of knowledge in the lines here indicated.

I have to thank all kind friends who have assisted me by sending photographs or drawings for illustrations; and I am specially grateful to Sir Thomas Hanbury for reading the final proofs of these pages.

ALICIA M. CECIL.

10 EATON PLACE, LONDON, S.W.
August, 1902.

CONTENTS

	PAGE
I. The Garden	1
II. Spring	35
III. Spring Work	63
IV. Summer	83
V. Autumn	131
VI Winter	167
Appendix	207
Index	211

LIST OF ILLUSTRATIONS

My Mother's Garden . . . . *Frontispiece*

PAGE

Hard at Work 5

The Mountain Clematis 11

Wistaria sinensis 13

Mats protecting Verbena on Conservatory . . 16

Mat when being made—Mat when put up . . 18

Garden by a Wall 19

Plan of Garden 21

Miniature Formal Garden 22

My own small Formal Garden 24

Gardens laid out by Queen Victoria for her Children . 26

Cyclamen in shady "Declivity" . . . 29

Corner in a Wild Garden 30

Snowdrops 38

Iris in a Wild Garden 44

A mass of Primroses and Polyanthus . . . 51

Crown Imperials 55

Lent Lilies 58

PAGE

Preparing for Summer . . . 65
The Thick-leaved Saxifrage . . . 71
Watering Seeds 76
Summer Garden 86
The White Peach-leaved Bell Flower . . 90
Jerusalem Sage and Goat's-beard Spiræa . . 93
A kind of Perennial Sunflower . . . 95
Globe Flowers and Iris . . . 98
Lilium candidum 110
Rose climbing on a Tree . . . 115
Rose trained on Posts 118
The entrance to the Island Garden . . 124
Pupils' Gardens at the School, Wycombe Abbey . 133
A Border in early September . . . 136
Seed Packets 139
Phlox and Evening Primrose . . . 142
Hyacinthus candicans and Hollyhocks . 148
Grape Vine as a Creeper . . . 156
Ornamental Gourds 163
Wattled Summer House . . . 169
Lilies of the Valley and Foam Flower . . 172
Royal Fern 176
Radish, Grass, and Tulip Roots . . 180
Rhizome of Solomon's Seal . . . 181
Stem of a Lime Tree . . . 184
The Scarlet Geranium . . . 186
Rose—Wallflower—Daisy . . . 188

PAGE

Daffodil 189

Garden Pea—Dead Nettle 190

Arum—Pea Pod—Poppy 191

Dandelion—Columbine—Blackberry . . . 192

Fig 193

Geranium pratense 194

Columbines 195

A Garden in the Snow 199

Christmas Roses 201

ERRATA

Page 99, line 5, for *Avaria* read *Uvaria.*

Page 122, line 11, *for* "from" *read* "or grafted close to."

I

THE GARDEN

Flowers are words
Which even a babe may understand.

BISHOP COXE.

THE GARDEN

A GARDEN, to those who love it, is a never-failing source of happiness. This love of gardens comes naturally to most people ; it is rarely that the sight and smell of flowers excite no joy, and yet it is only those who have worked and lived among their flowers who have felt this happiness to the full. Every one who cultivates this natural taste for flowers early in life will find as time goes on that it is an ever-growing fund of pleasure. A garden will repay with interest all the trouble spent upon it. Flowers are never ungrateful for care, and attentions lavished upon them cannot be thrown away, as is too often the case with thankless friends. The favourite toy may be broken, the wax doll may melt and lose her beauty, but the garden will never disappoint you. If for a minute you are distressed at seeing the flower-stalk of some choice plant broken off,

or the cruel frost nips a delicate treasure, compensation soon follows—the seeds come up exceptionally well, the pansies are finer and larger than you anticipated, or, in some way or another, your grief is forgotten in a new delight. The garden is full of surprises, something unexpected often happens, a primrose more brave than its fellows opens a pretty bright flower on some cold and dismal autumn day, or a precocious snowdrop pokes through the frosty ground and shakes its little white head as a harbinger of spring.

Another and perhaps the chiefest attraction of a garden is that occupation can always be found there. No idle people are happy, but with mind and fingers busy cares are soonest forgotten. There is not a day in the year, however hard the toil may have been, but that some employment can be found. "Satan finds some mischief still for idle hands to do," but will not trouble hands actively at work in a garden, for, as Bacon, the statesman and writer, said nearly three hundred years ago, it is "the purest of all human pleasures."

There is much good to be learnt in our gardens. The book of Nature, and the world of wonders she unfolds, are open to all who seek. Every seed that falls into the ground and dies and then springs forth into some

HARD AT WORK

green blade or lovely flower has its lesson of immortality—

> Emblems of our own great resurrection,
> Emblems of the bright and better land.
>
> LONGFELLOW, *Flowers.*

And the countless starlike daisies in the grass are as marvellous and have as great truths to teach as the myriad stars in the heavens.

> Wondrous truths, and manifold as wondrous,
> God hath written in those stars above ;
> But not less in the bright flowerets under us,
> Stands the revelation of His love.
>
> LONGFELLOW, *Flowers.*

One virtue which perhaps children find more difficult to exercise than older people is patience, but that must be learnt and practised from day to day and year to year if gardens are to be made to flourish. The habit of hurrying and not taking pains, is a very common one, whether it be over lessons or employments more amusing, such as painting, music, or needlework. But a flower cannot hurry; a regular process of growth goes on from the time the little seed begins to germinate, slowly but steadily, always doing its best, until the plant gradually reaches perfection. Winter after winter the trees wait patiently for the spring, and then gently and carefully unfold each tiny bud, till they attain

their full beauty in the summer. In like manner those who tend a garden must have infinite patience if they would succeed. A whole year, or even two or more, seems long to wait, but to grow many of the things described in the following pages it will take fully that time, and all the while care and trouble must be bestowed, for although a plant will grow steadily if all its surroundings are favourable, it is easily killed by many causes, such as a bad soil, choking by weeds, want of water, or too much scorching sun. It is only by study of the plants or reading about them that all they require can be learnt; but by a steady attention to rules, even in a child's small garden a great deal can be achieved.

If the soil is very sandy and light it can be improved by collecting leaf-mould from some wood, or, if possible, mixing some good soil and manure with the natural earth of the garden. If, on the contrary, it is of stiff clay or loam, children should try and get some sand to mix with it. If the garden is very shady, only grow such things as do not mind the shade; or, again, if there is no shade at all, some must be contrived by placing branches, or a sort of little tent of a sack stretched across sticks, to shade any special flower that flags under a hot sun, if it is to be grown at all.

It has been said that flowers only flourish in the garden of some one who loves them, which is a fantastic idea; but at any rate it is perfectly true to say that they will only attain their highest perfection in the gardens of those who study and care for them, and children who begin the task will find it a never-ending one, yet of ever-increasing pleasure and instruction.

> Not a tree,
> A plant, a leaf, a blossom, but contains
> A folio volume. We may read, and read,
> And read again, and still find something new,
> Something to please and something to instruct.
>
> HURDIS (on the title-page of each volume of Maund's *Botanic Garden*, 1825-1850).

Children do not often have the choice of a garden. They must, as a rule, take what is given them and make the best of it. But once the ground is assigned to them, much can be done to make it pretty, attractive, and original. The first step is to decide what kind of plants will thrive best, and to ascertain this several points must be considered—whether the soil is rich or light, the spot sheltered or exposed to the wind, whether it is in the sun or shade, or damp or dry, and once having settled these questions, the next stage is to determine whether the garden is to be what is called a "formal" one, or a wild one. Even

if the space is very small, there can be a great variety of ways in which to lay it out. Then again it is important to arrange to have the garden looking brightest when it can be enjoyed. Many children live all the year round in the country, so their gardens must have flowers in them, if possible, during all months of the year. Other children are in a town in the spring or early summer, and want flowers therefore in the late summer and autumn ; others again go to a town for the winter, so summer flowers are all they need, and it would be only a sad disappointment to plant early spring bulbs that they would never see in bloom.

Then some children will find their gardens ready made—perhaps a corner in the kitchen garden, or the end of a long border may be given up to them, where the soil is already prepared and dug ; while others may only have a bit of waste ground or a corner in the shrubbery, and will have to do all the preparation of the ground themselves. That may be the hardest work, but it gives perhaps the greatest satisfaction in the end. All these possibilities must be looked at in turn, and a little advice be given about each of them.

First consider a garden that is part of a border in the kitchen or flower garden. There may be a wall at the back, and if so it must

not be neglected; it will look so much prettier with a climbing plant on it than if it is left bare. In a warm part of England the choice of plants that will thrive is almost unlimited, and even in the North some which would die in the open will stand the cold winters against a wall. Once the climber is planted, the work does not end, as it will require training and nailing up every year, unless the small Virginian creeper is selected, which requires no tying up. *Ampelopsis Veitchi* is its Latin name. It will cover the wall with green leaves in the summer, and red in the autumn. If the wall is to look its brightest during the winter months, I should advise the planting of the bright yellow-flowered jasmine called *Jasminum nudiflorum*, because the flowers appear in the winter on the bare twigs before any leaves have come. A charming sweet-scented plant, which will flower on a wall in the winter or very early spring, is winter sweet, or *Chimonanthus fragrans*. The flowers, like those of the jasmine, come out before the leaves as a surprise on a cold January day, and scent the air with the perfume of summer, but the flowers are a pale yellow and not very showy. A brighter yellow flower, which comes out later in the spring, is *Forsythia suspensa* (or else *Forsythia viridissima*, another kind), which is extremely pretty. Another brilliant spring

flower is the Japan quince, or *Pyrus japonica*,

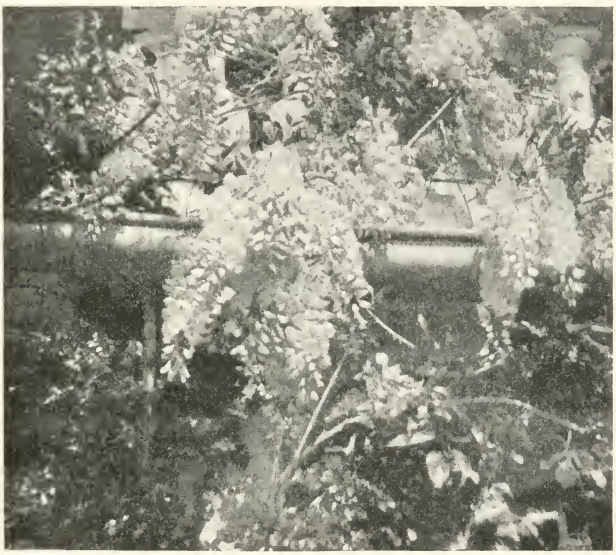
THE MOUNTAIN CLEMATIS
Clematis montana

which covers a wall with bright red flowers. Mezereon or *Daphne Mezereum* will grow as a

bush, and is quite hardy, but if there is not much room and you want bright colours from February to April you could plant it at the back of the garden patch against the wall. The flowers are a purplish pink, and very sweet. In the warmer parts of Britain, and especially near the coast, a most useful plant for covering a wall is *Escallonia macrantha*. It has small evergreen glossy leaves, and pink tube-like flowers which hang in bunches, and is attractive all the year round.

The difficulty of choosing late spring and early summer creepers lies in the number of things to select from, all beautiful in their own way. One of the most lovely in May or early June is *Clematis montana*. Perhaps you know the wild clematis or traveller's joy, which has masses of pale greenish-yellow flowers, small and close together, with a sweet scent, and is covered with fluffy seeds in the autumn. The flowers of *Clematis montana* also grow in thick masses, but though of course just the same shape as the wild one, with four petals, they are much larger and look like pure dazzling white crosses when closely inspected, and seem at a distance to be a white waterfall of blossom. Then there is *Wistaria sinensis*, which has long heads of light purple flowers, which hang down like

bunches of grapes; and *Kerria japonica*, with flowers like orange rosettes; and honeysuckle must not be forgotten, of which there are many good garden varieties, as well as the wild ones, all deliciously sweet scented, and some of them



WISTARIA SINENSIS

with evergreen leaves. With the warm days of May some roses begin to open, especially the old-fashioned pink monthly or China roses. These not only begin to flower early, but go on so late that in mild years several blooms come out in November, and I remember once

gathering one as a "Christmas rose." Roses must be mentioned again presently, but in passing I would tell you of one other rose very suitable for a wall, which blooms early and late, and that is *Gloire de Dijon*, a well-known, strong-growing kind of tea rose, with large pinky-yellow flowers.

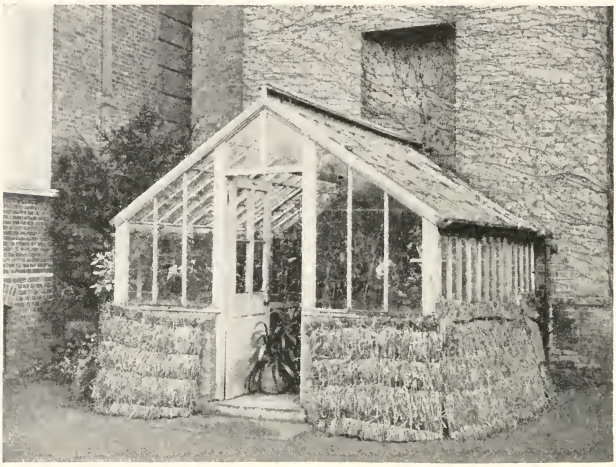
Later in the summer come other sorts of clematis, such as *Jackmani*. These have larger flowers than *montana*, and are of a deep purple or pale mauve colour. At the same time flowers the *Bignonia radicans*, which is very different to look at, but is also beautiful, with clusters of small trumpet-shaped scarlet and orange blossoms, and pretty foliage. It has a very tropical or "greenhouse" appearance, but on sunny walls it will grow in most places. Another plant which looks tropical, but will do well on walls, more especially in the warmer parts of England, is the wonderful passion-flower (*Passiflora cærulea*). As a small child, I had a bitter disappointment in seeing "Constance Elliot," the white variety, quite killed by the frost in my garden. I had no wall, and although I had planted it in a sheltered corner, I could only give it a post to climb on, —the result was this sad end. So I would warn all those who do not live in the very warmest parts of England not to expect passion-

flowers to live without the kindly shelter of a sunny wall. It is wonderful how much heat a wall imparts—not only does it keep away cold winds, but it retains so much of the sun's warmth that plants get quite a double share of its life-giving rays. But several of the other things I have mentioned will do without walls, so children who have not that shelter can plant them on poles or trellis-work. All the kinds of clematis and honeysuckle will thrive well grown in this way.

If you live in the colder, or more especially the damper parts of England or Scotland, there is a very lovely thing you can plant with success, which children in the warm dry South will very likely fail to grow, and that is the *Tropæolum speciosum* or flame nasturtium. It has bright scarlet flowers in summer, and very pretty leaves, grows in thick trailing masses, and later in the autumn has sapphire-blue seeds.

There are still the late autumn months to think of, and the wall must look gay then. If you have chosen to plant Virginian creeper, either the common or the *Veitchi* kinds, they will turn a gorgeous red, but like the trees these creepers will lose their glory and only their bare stems be left, so it is as well to try and have at least one plant which is evergreen and does not shed its leaves. *Escallonia* I

have told you of already, but another leafy thing is the *Cotoneaster*, with little white flowers, followed by red berries, and brighter still in winter is the *Pyracantha*, which has large bunches of scarlet berries. In the colder parts of England it is a good plan, if rosemary



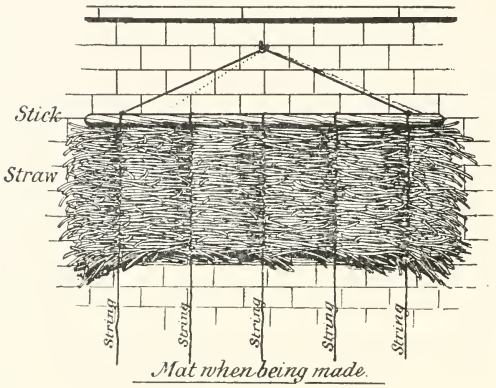
MATS PROTECTING VERBENA ON CONSERVATORY

is tried, to treat it as a creeper, and nail it to a wall. It will not reach very high, so there would be room for some bright flower above it, which would look well in contrast to the soft gray leaves and mauve flowers of the rosemary. Sweet-scented verbena, which is so delicious from early summer until the frost

scatters its leaves, will grow and flourish against a wall, even in cold parts of England, if it has just a little protection in the winter. I used to make such nice warm mats to cover mine that I will tell you how I did it, as it is quite easy work, and a very good protection.

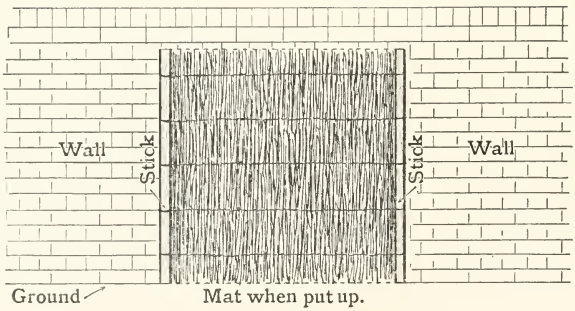
Get a stick three or four feet long, or however high the plant is that you want to cover, tie a strong piece of string a few inches from either end, and hang it up. I used to find a nail in the woodwork of an old summer-house —a very convenient place. Then get a bundle of straw, tie a stout piece of string about a yard or a yard and a half long (tarred twine is best) a few inches from one end of the stick which you have hung up, another about a foot farther along, and one or two more, according to the length of the stick; then take a small handful of straw and tie it on to the stick with your first string with a single knot, or what sailors call a "half hitch." The straw will most of it reach to the second string, so tie it again there. A few straws will stretch to the third string, but you will have to add a little more straw, and then tie the third, and if necessary a fourth string, and so on, row after row of straw tied together along the length of the stick, till you get it wide enough to cover the plant, perhaps two or three feet or more;

then fasten on a second stick to make the other upright post, take it down from the nail,



Mat when being made.

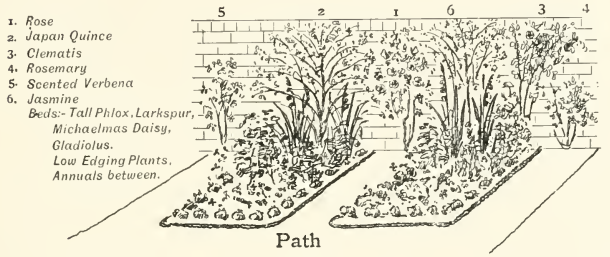
and cover your plant. Mats made in this way will do duty for many winters.



Mat when put up.

Having settled how to cover the walls, the rest of the plot must be thought of, and again

you must consider if it is to have flowers all the year round, or only some part of that time, and arrange accordingly. Remember the most sheltered part will be near the protecting wall. It depends on the size of the border how the flowers should be planted, so as to show to the best advantage. You want to be able to weed all over without hurting your plants, so you



GARDEN BY A WALL

must be able to walk up either side, or, if the patch of ground is wide, you could leave a space to walk up the centre. In either case it will be best to plant the tallest plants farthest from the path, and the low-growing ones near the edge, so that they are seen and not hidden by the taller. The plants which are the best to grow would be nearly the same for each kind of garden ; it is only the arrangement of them that will differ, so I will give you some lists and hints in another chapter. What you

must remember is, that in your garden, if it is a small piece of border, everything must be very neatly kept; the plants must not get wild and straggling; some may require "tying up," some "pegging down," so as to make plenty of room to grow as many nice things as possible.

This is very necessary also if your garden is to be a miniature formal one—that is, if your piece of ground is laid out in an even, straight way, even though it is not a piece of border, against a wall.

There are of course endless variations of the kind of design you can have, but the chief point in all must be that the pattern is what is called symmetrical or regular. My own first garden was a formal one, and though I by no means advise children to copy it as being the best form, still it will be a good example of that style. The size was about 40 feet long and 22 feet at the widest part, and the shape of a half-moon. One side was protected by a high clipped laurel hedge, the other side was divided from the path belonging to the regular garden by a straight strip of grass, which was kept mown, sometimes by the gardeners with a mowing machine, but frequently by tame rabbits or guinea-pigs being penned on it systematically until they had eaten it down. The

PLAN OF GARDEN

paths were gravelled, and the beds, which you see by the design were of various regular shapes, were edged by box. Now a garden like this requires a very great deal of care and attention; perhaps that is one of its charms; but it also has a great many disadvantages. Some of its merits are that the beds are small, and

MINIATURE FORMAL GARDEN

little hands and short arms can reach all over, and so can tend and weed them with ease. If the ground was very uneven, children should try and make it level. This would be hard work, and take them some time; but, with care, it could be done. The holes would have to be filled up with earth taken off the highest mounds. If the garden was all on a slope,

part could be made flat by digging up some of the earth and heaping it at one end, so as to form a miniature terrace. Even if it took children a whole summer to accomplish so great a task, the result would well repay all trouble.

The picture shows what a garden of this kind might look like when finished. The terrace is only a foot to 18 inches high, the bed about 2 feet 6 inches by 5 feet long. A hedge round it would be a great improvement, or any sort of railing or wire netting could be planted with ivy or some other creeper to cover it thickly like the one in the picture, which would have just the same effect as a real hedge. When it is all tidy and full of flowers, the effect is very lovely. Things have to be kept small and neat, and the whole can, even by a small child, be made to look like a miniature of some large formal garden. But its drawbacks are that plants very quickly get too large for the little beds, the box takes so much nourishment from the small patches it encloses that frequent renewing of the soil is necessary, and the box requires a great deal of attention to keep it thick and low, so that there are no ugly gaps and it is not so high as to hide the flowers. The paths also take a lot of weeding; they are, however, nice and dry to work from in

wet weather. Less complicated little formal gardens would have fewer of these faults. There might, for instance, be more grass with only one gravel path down the centre, and straight beds cut in the grass on either side, with an archway covered with roses or some other

MY OWN SMALL FORMAL GARDEN

creeper at either end of the path, to form an entrance; or there might be two paths crossing each other, with creepers on arches or stakes where the pathways joined, and many other plans in the same style might be chosen.

My mother's garden (see frontispiece) was a

small formal one, and had been the children's garden even before she enjoyed it. The old damask roses standing there now must have grown in that same sunny corner for nearly a hundred years. The gardens laid out by Queen Victoria for the king and the princes and princesses at Osborne were small formal ones. A part of each was devoted to flowers, the remainder to fruit and vegetables. The ground was divided into nine plots, each bearing the name of its owner from the Princess Royal to Princess Beatrice; and these were made up of fourteen straight little beds—four for vegetables and asparagus, while raspberries, currants, gooseberries, and strawberries each had two assigned to them, and two were devoted to flowers. Hard by the garden a thatched shed gave shelter to all the tools required to keep them in order, each little wheelbarrow having the name of the prince or princess to which it belonged painted on it. These gardens are still, by his Majesty's orders, kept neat and tidy, and the tools carefully preserved.

The next alternative in planning a garden is to make a quite "wild" or irregular one. The way to do this is not to have any exact formal design, but to make use of the natural lie of the ground, and plant the flowers accordingly. This

GARDENS LAID OUT BY QUEEN VICTORIA FOR HER CHILDREN

kind of garden will not require less labour than the formal one, although it is work of a different kind. There will be no box to clip or paths to make tidy, or the grass edges of the beds to keep evenly cut, but instead there will be a great deal of weeding and care, lest the plants should overgrow and hurt each other. The climbers, instead of being planted on poles, arches, or walls, can be put beside trees for support, but they will require tying up all the same, or a high wind would come and blow them away or break them down before they have got firm hold of the tree stem. Bulbs, instead of being planted in beds, can be put into the grass and allowed to find their way to the sunshine with the blades of grass around them. The leaves of the bulbs must be left to wither, and not cut off as soon as the flowers are over, even though they may look untidy. Larger plants can be admitted, as there will be no fear of their reaching over the edge of the bed and encroaching on the path. Instead of arranging the various plants at even distances or in rows, they can be placed so as to look as if they were growing there naturally. If, by chance, there is a stump of a tree, climbers can be made to trail over it, or, if it is very old and tumbled down, ferns could grow from among the decaying bark. If there are stones, instead of clearing

them away, rock-plants can be planted among them; little alpines, which are accustomed to growing among rocks, will thrive much better in the crevices and corners thus obtained, and their roots will be quite at home poking their way between the stones. If there is a hollow, it can be filled with low-growing plants, and taller ones put on the higher ground, so as to make the most of any unevenness instead of doing your best to level the ground. The more varied the ground is, the more easy it will be to get pretty effects in a wild garden. Sometimes even a little digging will help to make the hollows deeper and the miniature hills higher. In my own wild garden there was a small shady hollow; a bank on two sides led from the flat part of the garden, while one end sloped down gradually. Trees on the farther side made the little hollow shady, while the top of the bank caught the sun. I got some old roots and stakes, and planted Virginian creeper, purple clematis, and a white cluster rose (Turner's crimson rambler was given a place years afterwards when it came out) where the sun shone on the level ground at the top of the bank. Then I made three little steps down, and beyond the steps planted two bushes of *Rosa rugosa*, which I knew would grow fairly tall, so

that when I stood in the hollow at the foot of my little steps these roses and creepers gave additional height. Then below, in the shadow, I planted low-growing things that did not mind the shade, some ferns, primroses, cyclamen,

CYCLAMEN IN SHADY "DECLIVITY"
Saxifraga hypnoides covering the stones

and lily of the valley. There were autumn as well as spring flowering cyclamen, so that I always found something of interest in my little hollow, which I fancifully named the "Declivity." But this is only one of the many hundreds of ways one can make scenery in a wild garden, and find great pleasure and

amusement in seeing one's little landscapes grow.

It requires a great deal of real hard work to get things to grow well in a wild garden, especially if it is some outlying bit of the grounds which is given you for a garden, where

CORNER IN A WILD GARDEN

nothing has been planted before, as then you must dig the soil very well and thoroughly before anything is put in. Only a single spade-depth dug in the ground will not be enough ; you will have to turn over the ground and then go as deep again, and you will find the soil much more hard and stiff to turn than if your

garden is in a part with soil already prepared. It is a good plan, if there is any sort of rough grass, to remove it first, and lay it aside, then, as the trenches are dug out, chop up well the squares of turf and put them at the bottom of the trench. These will decay in time and improve the quality of the soil. My wild garden was mostly such poor, sandy soil that not only had I to dig hard, but I was given a wheelbarrow, and I used to carry away loads of stone and sand and get leaf-mould, from the gardeners' leaf-heap, to mix with the sand that was left. It was hard work taking away the sand, so I made some of it into a sort of mound, and planted sea-thrift all over it, and a yellow horned poppy, as I knew neither of these minded having only sand to grow in, and the result was very charming, especially when the sea-thrift was a mass of bright pink flowers.

Weeds are always a sore trial, but more especially in a wild garden. I well remember my fights with thistles and nettles; and what was even more unkind, the leaf-mould I brought with such care and trouble used to have in it the roots of ground elder, a most tiresome weed, which would grow apace in spite of all my efforts to check it; but these struggles are now many years ago, and when I come back and look at my old garden, I am

delighted to find my perseverance was really rewarded, for just a little attention in the early spring will now keep these enemies at bay.

Now I have told you something about the various kinds of gardens, so that you will understand what is meant when I tell you that a plant is suitable for a wild garden, or that it should only be grown in a bed, and you will be able to know whether it would suit your particular garden or not. But a large number of plants will grow equally well in either kind of garden, in which case I will not tell you to put them in any special place. My advice to children is to be content with the kind of garden they have, and to make the very best they can of it. All gardens may give an equal amount of pleasure, and nearly all flowers too. There is such an immense number to choose from that every kind of garden can be well supplied with plants suited to it. My own formal garden was rather shady, and by experience I found that the flower which really grew best of all in it was the pansy, so I devoted the "lion's share" of the beds to that plant, and gave it special care. I grew so devoted to my pansies that, although I love all flowers, I think the warmest corner in my heart is still given to the pansy. I grew the violas or tufted pansies, as well as the large handsome

show pansies, and I knew the expression in their faces that the various markings gave them until they were as familiar as friends. One yellow one I was almost afraid of—its face was so cross, I fancied I could see the frown, and another soft gray one with a small eye seemed always smiling and kind. There was practical work to do in plenty. I was careful to save my own seeds, and the slugs did their best to prevent me, so I invented the plan of putting white paper collars round the flower which I wished to save, to stop the upward progress of the slug. Then I amused myself by doing some of the other insects' work, which I will tell you more about further on, and with a paint-brush out of my sixpenny colour-box used to take the pollen from one plant to another; the reds I took to the yellows in the vain hope of producing a scarlet pansy, but was more lucky with the crosses among the darkest shades, and produced a really jet black pansy. This was named "the velvet paw," as it was as black and soft-looking as our black cat's paw.

Almost any flower will furnish as much amusement as did my pansies. My mother has often told me of her success as a small child with her auriculas, "dusty millers" or "bears' ears," and any child who cares for

flowers and a garden can reap the same kind of pleasure. Be content with your garden, employ every inch of it to the best advantage, and whatever flowers you succeed in growing will tenfold repay your care and tending.

I know not which I love the most,
Nor which the comeliest shows;
The timid, bashful violet,
Or the royal-hearted rose,

The pansy in her purple dress,
The pink with cheek of red,
Or the faint, fair heliotrope, who hangs
Like a bashful maid her head.

For I love and prize you one and all,
From the least low bloom of spring,
To the lily fair, whose clothes outshine
The raiment of a king.

PHOEBE CARY, *Spring Flowers.*

II

SPRING

I come, I come ! ye have called me long,
I come o'er the mountains with light and song
Ye may trace my step o'er the wakening earth
By the winds which tell of the violets' birth,
By the primrose stars in the shadowy grass,
By the green leaves opening as I pass.

FELICIA HEMANS, *The Voice of Spring*.

SPRING

SPRING FLOWERS

Of all the seasons of the year Spring is perhaps the most charming in a garden. Everything is waking up after the long winter sleep ; the buds on all the trees are opening and fresh green leaves peeping out, the ferns are sending up tender soft fronds, all tightly curled and often covered with brown velvety down, and from among the ends of the dead stalks of last year's flowers new growth begins to show. It is very wonderful to watch how daintily all these young leaves come up in the garden, and there is the greatest difference amongst them. The larkspurs have very pale young shoots, the peonies handsome dark red spikes, young phloxes appear in varied hues of green and brown, and every shade of green from pale emerald to a deep olive is to be found among other plants.

In mild winters many flowers begin to make

their appearance in January, and it is difficult to define the line between winter and spring. Winter aconites and snowdrops can be claimed by winter, but for our purpose it is best to

SNOWDROPS

class together all the plants that are busy growing when snow is on the ground, and which burst into flower on the first mild days, and call them all "spring flowers."

In planning what spring flowers are to be grown, the arrangement must, as we have said

before, depend on the kind of garden they are to go in, and they must fit in and take their place among the plants which are to make it gay during the rest of the year. In the small formal beds, if there are many perennial plants (those which come up year after year), there will only be a little room for a few bulbs and spring flowering plants in between them in little clumps, or else planted in rows round the edges of the beds. If the garden is wholly for spring flowers, then much more can be done; some beds can be filled with bulbs entirely, others devoted to such plants as forget-me-not or wallflower, which flower in the spring. In the wild garden bulbs can be planted in groups in the grass, and other spring flowers arranged here and there.

One of the earliest things to flower is the pretty winter aconite (*Eranthis hyemalis*). It has bright yellow flowers, surrounded by a sort of frill of green. It loves a wild spot under trees, and will often spread itself so as to form a green and golden carpet from January to March. At the same time appear the snowdrops. Nothing is more beautiful than the dainty white and green bells of the common snowdrop, familiar to all, but in a good garden it would be interesting to have some of the rare kinds as well. Even children might be

able to get some, as although it is not many years since the newer sorts were brought to England, chiefly from the high table-lands of Asia Minor, some are already becoming fairly cheap and easy to get. Their chief merit is that they are very much larger, and some have quite a sweet scent, but they flower a little later than the common ones. A very pretty one among these is called "Elwesi." The Latin for snowdrop is *Galanthus*, and this kind is called after a Mr. Elwes, and the "i" at the end is the Latin termination.

You may wonder, children, why I trouble you with ugly-sounding Latin names when the dear little flower has such a lovely English one as "snowdrop," which describes so well the delicate flowers, and suggests the time of year they come out. I would not for a moment have you think that I want you to use the long Latin names of these or any other flower; I love the English ones too well. Daisy, or else "the eye of day," is a far sweeter name than *Bellis perennis*, and "cowslip" is to me a much more pleasing word than *Primula veris*, but still there is a great deal to be said for knowing the Latin names as well. The chief advantage about the Latin words is that they are universal to all botanists and gardeners—that is to say, a Frenchman or German would understand

Galanthus nivalis to be the common snowdrop, even if they did not understand English, and you were unable to tell them it was a *Perce-neige* or *Schnee-glöckchen*, the familiar names in their own languages. I once had a striking instance of this world-wide use of the Latin names. I was travelling in a steamer from Finland to Sweden, and most of the passengers belonged to one of those countries or to Russia, and no one on board could talk English, and many no language at all that I was able to speak. It happened that our ship was put in quarantine because she had come from Russia, where the cholera was very bad, and we were kept at some distance from Stockholm, near a small island on which a temporary hospital was being built. By some special luck the doctor allowed us to land and take a walk on the island, while most of the other poor passengers could not leave the ship. I brought back with me a bunch of wild flowers—heather, milkwort, and many other common things, and gave them to some of our less fortunate fellow-travellers, and I soon found I could have quite a conversation with a Finnish lady, as she knew all the Latin names, and we settled what variety of *Erica* and *Polygala* they were, and spoke of them each in turn by name, although I did not know a word of her language.

It is also sometimes useful also to know the Latin name in order to indentify a particular flower. One very common instance of a pretty English name being confusing or misleading is the word "bluebell." Some people would only use it if they meant the "Bluebells of Scotland," a kind of *Campanula*, while many people always call the wild blue hyacinth, *Scilla nutans*, which carpets the woods in May, "Bluebells." Supposing you wished to buy one or other of these flowers from a nursery-gardener, you would have to explain which you intended. So my advice to all children is to learn the pretty English names, but never laugh at the long Latin ones, and try and remember them too when you can.

But to return to the spring garden and its many flowers. Very like the snowdrop is the snowflake, and one kind (*Leucojum vernum*) flowers early in the spring, although there is a summer flowering kind (*L. æstivum*) as well. The spring one does well in a bed or border. Blue flowers, which are uncommon at many times of the year, are plentiful in the spring, so it is well to make the most of them. One of the very brightest is the Siberian squill (*Scilla sibirica*), which will grow contentedly either in beds, borders, or in the grass; it is about five or six inches high, and should be in every

spring garden. Something like it, but with more star-like flowers and blue and white, not all pure blue, is the "glory of the snow." Some of these lovely spring bulbs are found in Asia Minor, near the place where the large snowdrops came from, and there it grew in quantities and flowered as soon as the snows melted. The most common kind is called *Chionodoxa Luciliæ*, another rather brighter blue is *sardensis*, while the largest of all, as its name implies, is *gigantea*. Any of these will grow just as readily as the squills in beds or in the grass. There are some dark blue flowers, too, which, though not so showy, are nice to have, and that is the common grape hyacinth or *Muscari*. The flowers are like a cluster of grapes round the stem, which is some six or seven inches high; another taller *Muscari, comosum monstruosum*, is called the "feather hyacinth," as it looks so soft and fluffy and like a feather.

Among the early-flowering iris there are many shades of blues, from pale gray to deep purple. The Iris tribe is a very large one, and from January till far on into the summer some of the many varieties should be in flower in every garden. There are two classes of iris—those with creeping roots and those with bulbs. The Spanish belong to the bulbous class, the German to the other; both have endless con-

IRIS IN A WILD GARDEN

trasts in size and colour—blue, purple, yellow, brown, and white—and they flower from May onwards; but there are other forms as well. The great big Japanese ones which have lately become well known, called *Iris Kaempferi*, come out in the summer, and can only be grown in a bog garden, but there are many kinds which do well in ordinary good garden soil; foremost among these comes *Iris reticulata*, which is small and deep blue, with fine grass-like leaves. This blooms very early in the spring, and is therefore most useful. Even earlier still appears the pale blue *Iris stylosa* In a wild garden it will form large plants with ribbon-like foliage, and its lovely flowers in the south of England are often out as early as Christmas. Another bulbous plant, the "spring star-flower" (*Triteleia uniflora*), is white, with a sort of bluish tinge, and has a mauve stripe down each point of the star. It shows early, and lasts till April, and grows well in any nice sunny spot.

Foremost among blue flowers stands the gentian. Among the cold snows of the Alps the gentian comes out "timidly peeping" with the first breath of spring which is able to thaw the ice-bound earth, and in the calm, majestic stillness among those snowy peaks, she

. . . gazes on high,
Till she grew heavenly,
Blue as the sky.

Mrs. HEMANS.

And yet this lover of Alpine solitudes will live and bloom for us in our gardens, even on flat beds, in parts of England scarcely above the sea-level. It is not difficult to arrange to give it the soil that suits it, as it will do well in any good garden soil that is not too heavy (in which case mix some sand with it). On the surface of the soil or just below it let there be a few small stones, preferably limestone, or even bits of lime rubbish from some old building. It likes plenty of sun, but not to be too dry, so if it is in a very hot border it must have some water in summer. The easiest to grow and the best-known kind is *Gentiana acaulis*, the gentianella, but another smaller and vivid blue gentian is *verna*, which carpets the Alpine pastures in spring. This is more difficult to establish, but on a rock garden or a special corner of a border, where its wants in the way of soil, sun, and moisture are carefully attended to, it will thrive and bloom well.

A blue flower which likes the shade and appears in spring is *Omphalodes verna*, called the "creeping forget-me-not." Its flowers are larger

than those of the meadow forget-me-not, and it is of a more intensely bright blue. The roots creep along the ground, and if planted in a partially shady place in a wood it will soon form large patches and seem quite at home. It will also grow well in beds or borders. The real forget-me-not, or *Myosotis*, which belongs to the same (borage) family, must, as its name tells us, not be forgotten among the blue flowers for the spring garden. There are several kinds which grow wild in Britain; the wood one and the meadow one, which grows beside streams, are both familiar, and there is also an early kind, *Myosotis dissitiflora*, which is largely used for spring bedding. In nurserymen's catalogues varieties which are nice to grow from seed are often advertised. I remember getting one called "Little Jewel" many years ago, and planting a border of it round the largest bed in my garden with very successful results.

Another blue spring flower which must find a place is the windflower of the Apennines, *Anemone apennina*. This will grow either in beds or rock-gardens, but is most charming when planted in woods or in waste places where the wild English windflower would be at home. *Anemone blanda* is very like it, but with rather larger blue stars. It is not quite so easily grown, but in bright sunny spots flowers very

early in the spring. The hepaticas, also familiar favourites, are a kind of anemone. The common hepatica does well in simple garden soil, in bed or border or edge of a wood. It does not like being disturbed, but will grow year after year in the same place, the flowers appearing among glossy dark leaves. The single blue or double pink varieties are the best known, but there are also single pink and white. The single blue are very often seen on the Riviera or in woods in the Tyrol and other parts of Europe. Another plant very like it is *Anemone angulosa*. This kind also comes into bloom about March, but the blue stars, which are larger than the ordinary hepatica, appear with hardly any of the leaves, It should be planted in beds or borders that are not too dry and sunny.

Purple rock-cress (*Aubrietia purpurea*) is useful for bedding or edging, or for planting among rocks, and is of a mauve, and sometimes of a purple shade. It is closely allied to the Arabis or white rock-cress. There are some very good new varieties of *Aubrietia*, with larger flowers than the old one, to be obtained now, such as *Hendersoni*, with deep reddish-purple blooms. This is already getting a long list of blue and purple spring flowering plants, and yet there is an all-important one not men-

tioned which it would be indeed sad to go without—the violet.

> Violets! Deep blue violets!
> April's loveliest coronets!
>
> There are no flowers grow in the vale,
> Kiss'd by the dew, woo'd by the gale,
> None by the dew of the twilight wet,
> So sweet as the deep blue violet.
>
> L. E. LANDON.

Let every garden have its violets, for spring would not be perfect without them. But although nature scatters them in profusion in many of our woods and along the banks and ditches at the roadsides, they want some careful handling to get them as fair and fresh in a garden. To grow violets satisfactorily, whether it is the ordinary sweet-scented one or the grander Czar, or one of its still larger long-stalked relations (such as "Princess of Wales"), they require good soil, and must not be too dry and scorched by the sun; and yet they should not be planted in such a shady place that the sun never reaches them, or they will not flower. If you are given even one plant, you could soon have a show of violets, for they make many "runners" or offshoots, and if these are picked off the parent plant, and are carefully planted in good soil and partial shade in the spring, they

will be nice plants, ready to move in the autumn and to flower in mild seasons through the winter as well as during the spring.

The love of blue flowers must not lead to the exclusion of others. Reds and pinks are not so easy to get, nor is there as great a variety to select from. Among bulbs there are the lovely pink hyacinths. They make a fine show in beds or borders, but would not do to plant in wild or woodland places like the "bluebell." To get good pink or red flowers in the wild garden, in woods, or on banks, there is nothing better than the coloured varieties of the common primrose and polyanthus. There is every shade from pinkish-white to deep crimson, and everywhere primroses are welcome. Plants will do extremely well in beds or borders, but if they are to remain there, and not to give way to summer flowers, a partially shady place must be found, so that they do not get too dry and scorched by the hot sun. There are very pretty double primroses too, pale yellow or soft mauve or deep red, which make gay posies in the spring, and also a quaint old-fashioned kind, called "hose-in-hose," which look like two flowers, stuck one inside the other. These queer little "hose-in-hose" always had a great fascination for me, in association with the delightful story

by Mrs. Ewing called *Mary's Meadow.* The little children in that tale learnt all about the old book on gardens, Parkinson's *Earthly Paradise* (*Paradisus in Sole,* by John Parkinson, 1629), and tried to make a meadow near their home into a "Paradise" by planting garden flowers

A MASS OF PRIMROSES AND POLYANTHUS

in it, and began by putting the "hose-in-hose" among the cowslips; but I will not tell you more of the story, as I hope some day you may read the book.

The best way to get a lot of primroses is to raise them from seed—the small seedlings soon bear an abundance of bloom; but if any plant

has a specially good-coloured flower it is best to increase by division, to be quite certain of having more of the same. Take up the plant when it has done flowering and pull it into as many little plants as you can, putting them carefully into the ground in a cool and shady place. To be certain of keeping a stock of a particular kind of this, or many other flowers, the seeds alone must not be trusted to. The bees carry the pollen so easily from one flower to another that reds, mauves, and yellows get mixed, and the result of growing from seed is to produce plants of almost every shade. It is by careful selection from these that new shades of colour deserving of special names have been obtained. Wilson's blue is one of these newer kinds, with very distinctly bluish petals.

Out of the wood and shade, in the sunny beds or borders, there can be a blaze of brilliant red, with one of the showiest of spring flowers, the tulip. When tulips were first introduced from the East into Europe, over three hundred years ago, they created such a sensation that people got more excited over growing them than they have over any flower before or since. The greatest centre of this "rage" was Holland, and "tulip fever," as it is called, reached its height there, and it is still in that country that the greatest number of bulbs are raised, and

thousands come to England every year from Holland. When the first settlers at the Cape went out to South Africa from Holland, the most familiar flower to them was the tulip, and being only ignorant "Boers" or peasants, they could not see that there were no real tulips growing wild in South Africa at all, but they called all the spring flowers "tulips," and it is curious to this day to hear hundreds of people calling various plants, especially a very common small "morea," or kind of iris, a tulip. But there is no such confusion in the minds of English children, and they know the bright cuplike flowers of the tulip well.

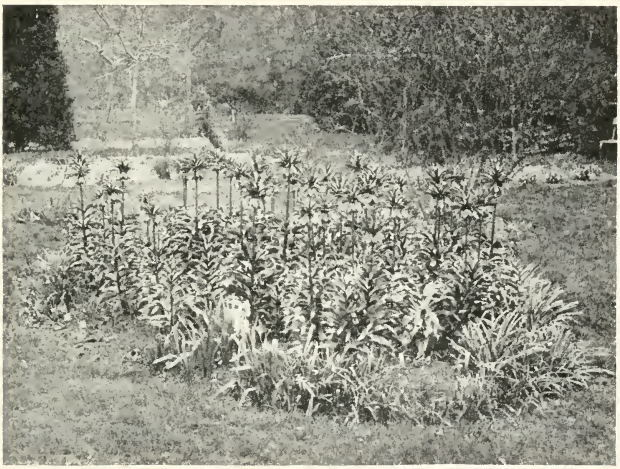
I wonder if you know the fairy-tale which tells how if a tulip is kissed when open in the sunshine a tiny fairy will come out of it? I used often to try the experiment, but perhaps it was want of good enough sight that prevented me finding the fairy. There are dwarf tulips and tall tulips, and both early and late flowering ones, little ones that stand erect like small soldiers, and the tall "parrot" tulips, which open their more untidy, but more artistic, drooping heads in May. There is a great variety to choose from, as the bewildering lists of names in the bulb catalogues testify, but all of them require care, good soil, and an open sunny exposure; should they also be sheltered

from the wind, their petals will last much longer in perfection.

If your garden is in a warm part of England, it would be an interesting experiment to try some of the Cape bulbs in the open, but they must have a very warm, sunny spot, where they get almost baked with the summer sun, or they will not flower well. If you can assure them of this, it is well worth while to plant some of these pretty plants. *Sparaxis* and *Ixia* are the best known, and there are many shades of colour among them; and a more uncommon bulb which can now be bought at a moderate price in England is the *Homeria*, which has starlike flowers of a rich salmon colour, and would be unlike anything else in your garden. It would be on the safe side to give these a little shelter in a hard frost; just a handful of litter or bracken might save them from being hurt by the cold.

One more bulb I would name among the reds, although its colour is not brilliant and showy, and that is the fritillary, with quaint purplish chequered, bell-shaped flowers. *Fritillaria*, the Latin name, is from a word meaning a chess-board, and so describes the funny pattern on many of the varieties. *F. Meleagris* is a native of Britain, and grows plentifully in some

parts (as in the meadows near Oxford), but it deserves to be planted in gardens as well, and the white one, or "great snow-bell," is very charming too. They flower in May. The handsome tall Crown Imperial lilies are also really fritillaries. Their golden crown is



CROWN IMPERIALS

formed of bells hanging round the stem, which are just the same shape as the chequered bell of the meadows. They are grand flowers, and if you have a big enough bed nothing looks finer than these kingly lilies, orange (*F. imperialis*) or yellow (*F. imperialis flava*), but they must be treated royally and given good soil. You are

sure to notice in planting them the curious "foxy" smell from the bulbs.

Foremost among the pink or red flowers which are not bulbous rooted, but which you can easily raise from seed, are the little crimson buttons, the double daisies (*Bellis perennis*). It is impossible to write of all the plants that flower in the spring months, but there are three more pink ones you must hear about before we go to the yellow ones—*Erica carnea*, *Daphne cneorum*, and *Saxifraga crassifolia*. The first is a kind of heath which comes out very early in the year. It likes best to be planted in peaty soil, but will thrive almost anywhere. The next is called the "garland flower" from the pretty trailing way it grows, with small evergreen leaves and clusters of deliciously scented pink blossoms. The third bears fine pale pink flowers late in spring, and has handsome thick leaves (see page 71). They would not be so easy for you to raise from seed, so you would have to get plants of all of these to be sure of success, and plant them in a sunny border.

Children will easily guess what flower I am going to put first among the yellow glories of spring. It could be none other than the daffodil. Whether your garden is a bit of wilderness, or whether it is a collection of neat little beds or a trim border, try and have "a host of golden

daffodils." The bulbs are to be bought at a fairly cheap price now, and you will find no way more satisfactory of spending a half-crown of pocket-money than by the purchase of some for your spring garden. Nothing is more charming than the ordinary wild daffodil, which appears like a golden carpet spread in many an English meadow in April. To learn the names and appreciate the beauties of the hundreds of varieties now in cultivation is quite beyond the capacity of even the wisest child, but still a little could be learnt, and gradually a small collection of some of the finest and more distinct might be got together in your garden. It is quite bewildering to any one not knowing much about daffodils to make out a daffodil catalogue. Without some knowledge or explanation it is indeed a puzzle, and, having experienced the difficulty myself, I will try clearly to define what a few of the many names signify.

Daffodils belong to a family of plants (part of the natural order of *Amaryllidæ*) called Narcissus, after a character in Greek mythology, a youth who was supposed to be changed into this flower. It is a very large family, embracing a vast number of species or distinct varieties; so, to make it less complicated, these are grouped together according to the shape of the flower—those with long trumpets, those with cups or

trumpets equal to the length of the petals, and those with short shallow cups. The wild daffodil or Lent lily belongs to the long trumpet group, called *Pseudo-narcissus* (or Ajax), and in the same class there are the large (*major*), the small (*minor*), the two-coloured (*bicolor*), the

LENT LILIES

double (*Telamonius plenus*), and so on. These are all found wild, if not in England, in other parts of Europe, but, besides these, there are numerous garden varieties raised from crossing and selecting seeds, and every year new ones are added to the list. Some of the most beautiful among them are Emperor, Empress, Horsfeldii, and F.

W. Burbidge, and these are now easily bought. There are still newer beauties, too rare for any child to aspire to. Next come the varieties with a shorter, more cup-like trumpet. The *incomparabilis* belong to this section, and classed in it is the well-known "butter and eggs." Among the fine garden varieties belonging to this group are Sir Watkin and C. J. Backhouse, and *Barri conspicua* and *Leedsii*. Then there are the jonquils, a kind found wild in Spain and deliciously sweet-scented. Next come the Tazetta or polyanthus group, with several flowers on one stem. There are various wild types of this group and many garden ones, such as "Grand Monarque," "Soleil d'or," "Scilly white" and "Paper white"; and, last, we come to the group with still shorter cups and large petals, the *Poeticus* varieties. The wild "pheasant's eye" belongs to this type, and other garden varieties, such as *Poeticus ornatus*, and they too are very sweet-scented. Bulbs of all these kinds must be planted early in the autumn, and they will flower well from March to May. Put them in good soil, and they will increase, and be all the better for being taken up and divided every two or three years.

We have thought of pink primroses already, but the real "yellow primrose" of our woods must not be left out, nor another flower, the

cowslip, associated in all children's minds with a sweetish, sickly-tasting tea, whose flavour was greatly improved by being drunk out of dolls' cups, and with round golden balls of sadly fleeting beauty, manufactured by hanging all the little heads on strings and knotting tight together. When "yellow cowslips gild the level green" in the parks and fields, they ought to be brightening the grassy miniature lawns of every wild garden.

I will only tell you of two more yellow flowers which bloom well all through the spring. One is daisy-shaped, and called leopard's bane, or *Doronicum*. There is a wild kind, which is pretty, but apt to become a trouble in a small garden, as it spreads quickly; a tall garden variety called Harpur Crewe, which lasts on into the summer; and, best of all, a dwarf one called *austriacum*, which sometimes begins to send up buds so early in January that they get nipped by frost. The other plant is called *Alyssum saxatile*, only a few inches high, with shining gold heads of small cross-shaped flowers. It is very easy to grow, and on a warm spring day it is a pleasure to watch the bees busily "improving the shining hour" at its countless little honey-cells.

You must not expect at first to have all or even a quarter of these many flowers in your

spring gardens, but if you ever did succeed in getting all I have told you about, you could find quite as many more the names of which I have not given you, so endless are the flowers that can be grown. Year by year with patience you must add to your store, and as that enlarges you will find you are able to give away and to exchange plants, so that your collection will increase the faster, and each year there will be more bright and cheerful blossoms to herald the spring.

III

SPRING

I see with half-attentive eyes
The buds and flowers that mark the spring,
And nature's myriad prophecies
Of what the summer suns will bring.

TOM HOOD.

PREPARING FOR SUMMER

SPRING WORK

GARDENS do not become beautiful of their own accord. It is only by real hard work that they can be made so, and the spring is one of the busiest times of the year, as, if hard work did not begin then, there would be no show of summer flowers. In gardening, busy preparation for the future must be constantly made. Lost time and opportunity can never be recovered. If the garden is neglected for even a short time it will soon show the signs of that neglect; and if the future is not looked forward

to, when it becomes the present the carelessness will bring its own punishment. But children must not be depressed by these thoughts, for they will find it is the very fact of this hard work, patience, and foresight which gives the greatest pleasure in gardening. You have been hearing a great deal about spring flowers, which to grow and where to plant them, but the work required to produce a bright spring garden with all these things in bloom has to be done months before—sometimes a whole year before. For instance, if you want to have a good show of wallflowers, you must sow the seeds one spring, then "prick out" the little plants, with room to grow big, and in the autumn move them to the bed or border where they are to flower the following spring. Then the bulbs of all spring flowering plants must be planted in the autumn. But to learn more of this preparation for the spring, you must read about the work to be performed in the autumn, and follow out all the directions you are given, thinking what spring beauties you want, and planning and working to achieve what you desire.

In spring there are two ways of employing the time—enjoying the freshness and beauty of new life, and preparing for summer. Oh, the pleasure of the first warm day of spring, when it

seems as if by magic the grass becomes "pied with daisies," so swiftly does the sunshine awake them and make them open their eyes after the long winter's sleep. The buds on the trees look plump and fat, and soon they begin to burst, and the fresh green to peep out and unfold. The distant landscape appears the softest blue, the grass an almost emerald green; the trees have a brownish-purple tinge, with pale green on their stately stems. The birds begin to look busy and restless, and carol all day with sweet tunes and cheerful notes that had been silent for long months.

Spring is coming, spring is coming.
Birdies, build your nest.
Weave together straw and heather,
Doing each your best.

Enjoy the spring, children, to the full, for it is indeed a lovely time, and, like your own childhood, should be full of promise, and fresh, gay, happy innocence.

But with new life comes new work; frost and snow and cold and dull dreary idleness have had their reign, and business must start in real earnest now. It is not only pretty trees and flowers that begin to grow, but the revival comes to weeds as well, and very soon they would choke and kill the more tender plants;

so the first duty in spring is to weed. There is a right and a wrong way of doing everything, and often a strange instinct inclines the choice to the wrong. Even in weeding this may be the case. A badly weeded garden may look quite nice and tidy for a few days, but if the weeds have not been carefully and completely pulled up by the roots and taken away, they will soon be as bad as ever again. Breaking off the tops will not do. You may have heard of the great poet Shakespeare, who wrote three hundred years ago, and said many things which are just as true now as they were then. In one of his plays he says this of weeds in the spring :—

> Now 'tis the spring, and weeds are shallow rooted ;
> Suffer them now, and they'll o'ergrow the garden
> And choke the herbs for want of husbandry.
>
> 2 *Henry VI.*, Act III., Scene 1.

Take warning, and with your own hands pull up by the roots every weed yousee. The reason it is so bad to let them remain is that every day they are in the garden they are taking nourishment out of the soil, and making it poorer for the flowers. Their roots, too, are often long, and if left they will twine in among the better plants, crushing and pushing the more tender ones, and robbing them of their

daily food. Some things, like groundsel, which you very likely bring into the house for your canary birds, are easy to pull up, but others want quite a fight to remove them. Oh, how I have tugged and pulled at the twisted roots of nettle in my wild garden, following the stringy yellow fibres a yard or more along the ground; or worse still have been my struggles with "ground elder," which made its way everywhere. It was a yearly toil, but at last I conquered, and made the weeds understand that although wild, yet it was a flower and not a "bear garden," and they had no place there. Another important reason why much weeding should be done in the spring is because, if left till later in the year, some of the weeds would flower, and then, as you know, follows seed, and for every weed you have one spring, you might easily have a hundred the next. The soft yellow little tufts on the groundsel are the flowers, and very soon, if left to grow, there would be quantities of fluffy white seeds like tiny thistledown being blown all over the garden and taking root and growing in all the best places. It has been said that to be a good gardener you must have "a cast-iron back with a hinge in it," and certainly the aches and pains after a day's weeding make one long for one; but such trifles must not discourage. I

had a partial remedy, as I was given by my mother a little hard cushion covered with a piece of old drugget or carpet. It had a loop sewn on one end, so that I could carry it easily, and very useful I found it, for I was able to kneel on the hard gravel paths between, and reach all over the small beds of my trim garden. For the paths themselves, a good hoeing with a Dutch hoe and then careful raking up of weeds will keep them in order.

If your little beds are edged with box, February is the best time to attend to them. They may want clipping, or parts may require replanting, if they have been allowed to grow too tall, and any gaps must be filled up. I found I generally had enough to fill the spaces where plants had died by dividing the thickest places. The miniature bushes come easily apart. But should you want a great deal, and cannot manage enough division, and no fresh boxes can be given you, the best plan is to wait till the autumn, and take cuttings from your best plants. Put them in a partially shady place, and they will soon root and be ready to arrange into your edging the following spring. In setting the box, press the soil very firmly along the rows, as that helps to keep them dwarf. Of course there are many other things besides box for edging, and if your beds are bordered

THE THICK-LEAVED SAXIFRAGE

Saxifraga Crassifolia

by any of them, such as the evergreen Euonymous (thrift), Arabis (or thyme), in the same way they will require a little tidying up in the early spring.

February and March are also the best months for cutting back evergreen shrubs. If any have encroached on your beds or plants, a little careful trimming should be done now. Roses too will require to be pruned. I advise you to leave it rather late. March would probably be better than February, as after they have been cut back they will make young shoots and begin to prepare for summer, and if this happens too soon, a sharp frost comes and cuts all the nice fresh growth. The art of pruning is very difficult, and by far the best way to learn is to watch a gardener doing it, or to get him to show you how. Some roses flower on the long trailing branches, such as the Banksian roses, and if you cut them off, you would destroy all the buds. In such cases only old and dead wood should be taken away. Dwarf and standard roses generally require cutting back till only two or three buds are left on each branch. But nothing except practice and experience will teach you exactly what to do. Climbers will in early spring want looking at, to see that the winter storms have not pulled them away from their supports, and may require to be nailed or tied up. Some may

want a little pruning, but be careful in doing so not to cut off the flowering branches.

When the first days of March arrive—of course always supposing the weather to be favourable—any cuttings of hardy plants that you took in autumn could be planted in the garden. For instance, pansies and violas could go out, and any carnations, to the places where they are to flower.

If you look at the gardeners in the hot-houses, if there are any at your home, you will find them now taking cuttings from the dahlias. The roots, which have been dried and stored all the winter, are put with a little earth and sand in heat, and cuttings made of the young shoots that spring up. If you have room in your garden, and are really taking care of it, I feel sure you could persuade the gardener to put in a few more cuttings than he wants and let you have them. It will be May before they could safely be planted out in your garden; but once you have a few young plants, you can be sure of your dahlias every year. As soon as the frost comes in the autumn, you must dig up the tuberous roots, dry them, and pack them away in an old box, and cover them up with a sack or straw, or such like, to keep away the frost. Then store them in any shelter you can find—your own little tool-house if you have one.

But the greatest work of all in the spring is the sowing of seeds. There are so many kinds of seeds that they cannot all be treated alike. First there are the seeds of perennial plants (those which live for many years), but most of these will not flower the first year. Then there are the seeds of annuals—plants which, if sown in the spring, flower in the summer, and die in the autumn. These last are very useful, as they so quickly will make the garden bright and supplement the more permanent plants, and it would be hard to get on without some of them, such as mignonettes or sweet-peas, But the perennials are most satisfactory in the end, as, if no showy annuals were sown for any cause, yet when the summer came the garden would still have the benefit of the work of other years, and there would be some flowers to enjoy. The treatment for plants which will not flower the same year as they are sown (such as larkspurs, lupins, columbines, oriental poppies, etc.) is to sow them in boxes if you can; failing that, you must put them in the open ground, sowing in rows. The boxes should be well drained with bits of broken pots (or stones) and moss at the bottom, then filled in with some good soil mixed with sand. The seeds should be evenly scattered over the surface and lightly covered with earth. While the

plants are growing they will require a little careful watering. Never let them get too dry, so that they droop or wither, but never water so violently as to wash away the seeds. When they have grown up, either in boxes or in the open ground, they will be overcrowded and too close together, so they must be "thinned out"—that is to say, a great many of the small plants pulled up, so as to leave room for the rest to grow. In time even the remaining ones will be too close if kept in their boxes, and will require what gardeners call "pricking out." Remove them carefully as soon as they have three or four leaves and are large enough to handle easily, and plant them in rows in some corner where they will not be disturbed, using a "dibble" or pointed stick to make a nice hole for each little root. They will have to remain in these places all the summer, and in the autumn or the following spring you can plant them where they are to live and flower. Annuals will want very much the same treatment; only when they are planted out from their boxes they must be put straight away into the place where they are to stay. But it is by no means necessary to sow all seeds in boxes; in fact, some do better if put in the garden to begin with, but they will require thinning out, as a rule, just as if they were in

boxes, and will have to be watered quite as carefully. Out in the garden they are sometimes attacked by one of the gardener's many little enemies, the mice, especially if they are nice, fat, nourishing seeds, such as sunflowers.

ROBIN HUBERT

WATERING SEEDS

The best remedy against mice is to get a little red-lead powder, mix it into a thick cream with water, and put the seeds into it before planting. The bright scarlet frightens away the mice and does not injure the seed. This red lead is poisonous to children, so be very careful not to let any go near your mouth or into cut fingers. Sweet-peas often have to be treated like this, or

they would be eaten up. Birds too are mischievous, and will sometimes gobble up the seeds as fast as they are planted. Little bits of stick put upright in the ground, and some cotton fastened from stick to stick, with pieces of paper tied on in places, to form a network above the patches of seed, will scare all but the very boldest bird away.

When you buy seed packets, even penny ones, a few directions are generally printed on them, and you cannot do better than follow the advice given. It frequently says to sow on a "hot-bed," or in pans or boxes, in February or March, but out of doors in April, the reason naturally being that the cold weather might come and hurt your young seedlings. Several things are certainly best in boxes, such as stocks, asters, *Phlox Drummondi*, Indian pinks, or zinnias; but if you cannot manage the shelter for the boxes, you can get on quite well without, as Nemophila, scarlet flax, convolvulus, sunflowers, marigolds, nasturtiums, corn-cockles, poppies, and many other things, will all do just as well out of doors.

I was very fortunate in having a very small glass frame given me when I was quite a little girl, and it was a great delight to me. It was put on the grass by my garden, on a raised "hot-bed" or heap of manure, which

was turfed over outside the frame. Inside, the manure was covered with good soil. In the autumn I filled it with cuttings, chiefly of pansies, for I was so fond of them ; but I found that much more tender plants, such as calceolarias, would do quite well there all through the winter, if I was careful only to keep the frame open in the warmest part of the day in cold weather, and cover it well with brackens and a mat in hard frosts. In the spring out came the cuttings and in went the seeds, at least all the tender ones, as I always had plenty of hardy ones too. How well I remember the first year of my frame, and the row of seeding godetias that came out of it—"Lady Albemarle," a bright pink, and "The Bride," a pure white, and how proud I was of my little beds that year.

One question is sure to present itself to any child : "How deep are my seeds to be sown ?" and it is certainly rather a puzzle at first. An old gardener told me once that he was leaning over the railing of a small allotment garden watching a young man at work. He was sowing a row of peas. When he came to the end of the row and looked with satisfaction at his work, the old gardener called to him, "You had better say good-bye to them, as that's the last you will ever see of those peas." He had

sown them all much too deep in the ground. When I remonstrated with my friend, and told him I thought he was very unkind to let the poor man spoil his whole row, and that he should have stopped him and explained near its beginning, he only laughed and said, "He will remember better another time how to plant peas." I hope you will not have such trying experiences while you are learning.

"Deep sowing" generally means three or four inches below the surface of the ground, and only such things as nuts or acorns require this. The larger garden seeds, such as peas, sunflowers, or nasturtiums, require one inch to one and a half inches of earth over them; for smaller seeds, such as larkspur, nemophila, or mignonette, only half an inch of earth is enough; while a few seeds are almost as fine as dust—some campanulas, lobelias, and many herbs—and these only need to be scattered finely on the top of the earth, or what is called "surface sowing." Care must be taken in sowing seeds to drop them evenly, not in lumps all together. You must especially be careful when sowing a border along the edge of a bed, or when they come up the border will be all of uneven widths, and will look bad and betray careless sowing. It is often a good plan not to sow all your seed at once, so as to have a succession of bloom.

Especially with sweet-peas this is desirable, and some can even be sown in the autumn, so as to have them early in summer. Do not forget they will require sticks to climb up, and do not let them get too tall before you give them some support.

You will find it takes all your time to keep the garden neat and tidy, and to do all the planting and sowing and watering necessary all through the spring months. Luckily the hardest work in spring and autumn comes when the weather is cool, and the laziest time is just when everything is out in summer, and it is too hot to work until the cool evening, when watering has to be done. In spring you will find the birds a great amusement when you are busy. They are busy too, and will carry off the worms you turn up to satisfy the open mouths in the nest. They get very tame, and your quiet work does not frighten them at all. One day I was working away planting some seedling Portulacas on a sloping bed in the hottest corner of my wild garden, when the gardener, coming by, called out to me, "A ground oven is sitting on your back, Miss." Now to this day I do not know what kind of bird a "ground oven" is.[1] I can only describe

[1] I find that "ground oven" is a local name for a "white-throat," either the "lesser white-throat" or the "garden warbler."

it, as the Cape Dutch do almost every bird they see that is smaller than a hornbill, as "a sort of finch." But this particular ground oven I knew well. His nest was in a bank between a tuft of grass and a primrose plant, and I had often watched my little brown and olive-green friend hopping about, and I suppose he wished to show a like friendly interest in my movements. Birds are only frightened when they are noisily disturbed. I have often peeped at a thrush or blackbird on its eggs so gently that they would not fly away, or would return in a very few minutes, before the eggs were cold or the young birds afraid. It is indeed sad when their nests are destroyed by mischievous children.

Hear what the mournful linnets say:
"We built our nest compact and warm,
But cruel boys came round our way,
And took our summer house by storm.

"They crushed the eggs so neatly laid;
So now we sit with drooping wing,
And watch the ruin they have made,
Too late to build, too sad to sing."

CHRISTINA ROSSETTI.

Children should rather welcome birds and their nests in their gardens, as they add to the beauty and joyousness of them, and also they do their share of work by eating up many

naughty insects that might harm the flowers. They are sometimes a little mischievous too, but when there are no fruit-buds to destroy, their other small crimes are easily forgiven, and their presence adds one more delight to the many joys of spring.

IV

SUMMER

The days are clear,
  Day after day,
When April's here,
  That leads to May,
And June
  Must follow soon.
Stay June, stay!
  If only we could stop the moon,
And June!

CHRISTINA ROSSETTI.

SUMMER

"The swallow! summer comes again," writes the poet Shelley, identifying one of the dearest of birds with one of the sweetest of seasons. It is said that one swallow does not make summer, but even with many darting about it would hardly be a real summer without the scent of roses and mignonette, the smell of the freshly-mown lawn, the scatter of white petals from the guelder roses, the silvery water-lilies on the still dark pond, or the tall ox-eye daisies and coral-like sorrel in the waving hay, the arching trails of wild roses, and the hum of the bees in the lime blossom. These and a hundred more pleasant and familiar sights and sounds are conjured up in the mind by the one word "Summer."

However small the garden is, let it be full of all that charms and attracts in this most delightful season. The work to produce a gorgeous summer garden must have been done long before, as now is the time for fulfilment,

SUMMER GARDEN
Creepers trained on small arches

not for preparation. The seeds must have been planted in the early spring or the previous autumn, and in late spring the young plants must have taken their stands in good time to pay their tribute of beauty as summer passes by. But summer brings some duties too. Any of the showy half-hardy plants like geraniums are now better in the open than nursed up indoors, and as soon as all fear of frost is over they should go out into the garden. Be sure that no seedlings are left overcrowding each other through any neglect in the spring. The climbers will grow tall, and must be given supports where it is necessary, and flowers with long stems will want sticks too, such as some of the lilies or the big sunflowers. Then a careful watch must be kept on the blooms as they wither, as you should remember the object of the showy flowers is not solely to look beautiful for our benefit, but to produce seed. If once they are left to come to seed, the plant will get exhausted, and, having fulfilled its mission, no new blooms will succeed the fading ones. If the flowering season is to be prolonged, pick off all the heads before the seeds are ripe, especially the pods on the sweet-peas. A few selected seed-pods can be kept for future use towards the end of the summer, giving them time to ripen before the frosts arrive. Great

care must be taken to leave no weeds, and an occasional weeding in hot sultry weather will have to be faced; and do not be afraid to use a hoe, keeping the earth nice and loose between the plants. But the hardest work of all, as a rule, is the watering. Except in an unusually wet year, it will exhaust both your time and energy, and yet it must be done. Luckily, the best time to water is the evening, when it is getting cool, otherwise the hot sun dries up the moisture as quickly as it is supplied to the plant. The watering must also be done regularly, not a great lot given one day, and then the poor plants left for days without a drink. In fact, they are even worse off than if they had had none, for the sun dries the soil that has been watered, and it forms into cakes as hard as bricks on the surface.

It is very easy to make work in a garden, and if the ordinary routine is over, the way to find fresh occupation is to look round among the flowers and see what can be done. For instance, if you have a carnation or pink and want to have more, now is the time to increase them. When the plants have made nice growth about July, select some of the good strong young shoots and layer them. That is, to clear them away from the parent plant, but leaving them still attached to it, peg them down to the

ground with a piece of forked stick, and cover over part of the stem with the soil. After a few weeks these pieces will have thrown out roots into the earth, and then they can be taken away and planted as separate plants.

If by chance you were given a pot of lilies of the valley, forced into flower in the early spring, now is the time to plant them out in a cool place where they would flower out of doors another year, for they will not force well two years in succession. Having disposed of them, the thought naturally comes, What shall I have to flower in a pot and brighten my room next year? Of course there are many bulbs suitable, such as Roman hyacinths or "paper-white" narcissus, and to have them really early, if you have no greenhouses, they should go into their pots in August, and be buried in a bed of cinders, until the points of the bulbs begin to show through the earth; then take them into the house to flower. If you prefer to sow seeds of something to flower in your room in the spring, there is nothing prettier than *Campanula fragilis*. The seeds could go into a box in July, and would want careful watering and watching to see they did not get scorched with the very hot August sunshine. Prick them into single pots when the plants are about three

THE WHITE PEACH-LEAVED BELL FLOWER

Campanula persicifolia alba grandiflora

inches high, and only take them into the house when there is fear of frost.

Summer is the time for sowing the seeds of some biennials, plants which live for two years. They spend one year in growing, and in the next they flower and seed and die. Many of the hardy ones will seed themselves and come up year after year without trouble, and then you will find instead of planting you will have to pull up the seedlings, or your garden would be overgrown. Foxgloves and honesty are two of the things very likely to serve you so. Other biennials both easy and nice to grow are *Campanula Medium* (the Canterbury bells), sweet-william, Brompton stock (also the night-scented stock), and French honeysuckle. These few suggestions will show you how much there is to think of and do in a garden, even during the least busy seasons of the year, and I feel sure you will take a pride in inventing work.

Now comes the question, What flowers should there be in a summer garden? and it is indeed a hard one to answer. There are so many, and all with their own special charms, that it is almost impossible to say that any one in particular can be dispensed with, and yet it is quite impossible to have everything even in a large garden, and far less possible in a very small one. Again, children must be reminded

that they must, as the proverb says, "cut their coat according to their cloth," and plant flowers that will grow best in the particular kind of garden that they happen to have. If it is a wild garden, they will be able to grow more of the tall perennials than if it is made up of little beds.

Here are the names of a few of the many flowers suitable for a wild garden or mixed border. They are mostly tall, growing from 1 to 3 feet or even 5 feet. They could be planted at the back or centre of a small bed, but they take up a good deal of room, and must not be crowded. All flower in the summer, in July and August, while some will linger on until the frosts come in October. Most of them only require ordinary good garden soil, and no very special treatment for sun, shade, or moisture, and all are perennial and herbaceous plants, and quite hardy.

Aconitum Napellus (common monkshood). —Dark blue, also varieties shading from white to blue. Will grow well in shade or near water. 2 to 4 feet.

Alstrœmeria aurantiaca.—Orange flowers; also *chilensis*, several varieties, pinkish buff to orange yellow. This requires good rich soil and a warm sunny place, and has flowers rather like lilies.

Campanula persicifolia (peach-leaved bell

JERUSALEM SAGE AND GOAT'S-BEARD SPIRÆA

Phlomis fructicosa and Spiræa Aruncus

flower).—Stems 1 to 3 feet high, hung with bright blue or white bell-shaped flowers, double and single varieties.

Delphinium (larkspur). — Many beautiful florist varieties,[1] from pale sky to deep royal blue. 2 to 4 feet, flowers in spikes of a number of flowers together.

Dictamus Fraxinella (Fraxinella).—Purple or white, 1 to 2 feet, several blooms on each spike.

Eryngium amethystinum (a kind of sea-holly).—Round blue flowers and prickly leaves, 1 to $2\frac{1}{2}$ feet.

Funkia japonica or *grandiflora* (white), and *Funkia Sieboldi* (mauve) (plantain lilies).—1 to $1\frac{1}{2}$ feet, with large handsome leaves.

Galega officinalis (goats' rue).—Mauve or white, 2 to 4 feet, flowers like large clover.

Gypsophila paniculata.—Very small white flowers in light graceful bunches, 2 to 3 feet high. The plant forms a round thick bush.

Helianthus multiflorus (sunflower).—Both double and single, and other varieties, such as "Miss Mellish," 4 to 6 feet, yellow, blooms late in summer.

[1] "Florist varieties" means those which have been raised by seed by different nurserymen and gardeners from a careful selection from among the species which are found wild in some part of the world. Generally those raised by florists are better colours or larger than the wild ones, or double, or variegated.

A KIND OF PERENNIAL SUNFLOWER

MISS MELLISH

Hemerocallis (day lilies).—Several varieties, *flava* and *fulva* both yellow and buff, 2 to 3 feet, large flowers, early summer.

Hypericum Moserianum (a kind of St. John's wort).—Bushy habit, 1 to 2 feet, yellow. The flowers are not so large as in the common great St. John's wort, but that plant will increase very fast and trail along the ground, and is apt to become a trouble in a very small garden.

Linaria dalmatica (Dalmatian toadflax).—3 to 5 feet. Bright light yellow and orange flowers, like the wild butter-and-eggs.

Linum perenne (perennial flax). — Bright blue, 1 to 1½ feet.

Lychnis chalcedonica.—Scarlet, 1 to 3 feet, a number of small flowers forming a flat round head.

Monarda didyma (red bergamot or bee-balm).—Scarlet nettle-like flowers, and aromatic-scented leaves, 2 to 3 feet.

Œnothera fruticosa (evening primrose).—Pale yellow, 1 to 3 feet. The large flowers open towards the evening.

Papaver orientale (Oriental poppy).—Scarlet, very large flowers, early summer. Also the Iceland poppy (*nudicaule*), much smaller, with yellow or orange flowers.

Pæonia (peony). — Many florist varieties, red, pink and white, double and single. Also

P. tenuifolia, red flowers with soft feathery leaves. There are also the grand Japanese tree peonies. They require good soil and care, and grow large; they are sometimes difficult to establish and expensive to buy, but are very beautiful. Red, pink, mauve, and white. Once planted, peonies should not be moved.

Pentstemon barbatus.—2 to 4 or 5 feet high, scarlet, trumpet-shaped flowers hanging down. Also many florist varieties; these are not so hardy, but have larger blooms and are not so tall.

Phlomis fructicosa (Jerusalem sage).—A handsome nettle-like plant, with yellow flowers.

Phlox.—Many florist varieties. Pink, red and white, 2 to 3 feet, large heads of flowers. They like being well watered.

Potentilla.—Several florist varieties. Yellow, orange, bronze, and red. Like a tall-growing "silver weed."

Pyrethrum carneum.—Double and single varieties. Red or pink, 1 to 2 feet. Like double ox-eye daisies.

Ranunculus aconitifolius (double variety) (fair maids of France).—Small double white flowers, many on each stem, like tiny rosettes, 1 to 3 feet.

Rudbeckia californica,—5 feet, yellow, daisy-shaped flower, with dark cone-shaped centre.

Spiræa (meadow sweet).—*Spiræa Aruncus*

(goats' beard), white, 3 to 5 feet; also *Spiræa palmata* and *Venusta*, bright pink, 1 to 3 feet.

GLOBE FLOWERS AND IRIS

These will also grow near water and in partial shade.

Thalictrum aquilegifolium (the columbine-leaved meadow rue).—Purplish, 1 to 3 feet, with pretty fern-like foliage.

Tritoma or *Kniphofia* (red-hot pokers, or flame flowers).—Several varieties (*Avaria* is a common kind), 3 or 4 feet. Scarlet and yellow flowers, late summer and autumn.

Trollius (globe flower), *Europæus*, *Asiaticus*, or *Napellifolius*.—1 to 2 feet high, flowers like round balls either yellow or orange.

The small beds and the front of the borders must now be thought of. The following is a list of summer flowering hardy perennial plants, but unlike those on the last list they are low-growing, and would not take care of themselves in a wild garden unless they were planted in a rockery or Alpine garden, where they would do very well. But any good garden soil will suit them, and they would make a nice edge to a border where some of the taller perennials were growing at the back, or could be grown in small beds, and would make a striking contrast from the violas, carnations, or other things you may be advised to plant in some of the beds.

Campanulas (harebells).—*Alpina*, deep blue; *carpatica*, blue; *turbinata*, large dark-blue flowers on a small-sized plant; and many other varieties.

6938

Dianthus deltoides (maiden pink). — Pale pink with a dark circle, or white.

Geum montanum (mountain avens).—Yellow.

Heuchera sanguinea.—Coral-like pink, many small flowers on slender stem ; early summer.

Iberis saxatilis (rock candytuft).—White ; early summer.

Linaria alpina (Alpine toadflax).— Purple, with a little bright orange.

Linum alpinum (Alpine flax).—Blue.

Lithospermum prostratum (gentian gromwell).—Very bright blue. Spreads out flat along the ground, or would hang over stones.

Mimulus moschatus (common musk).—Yellow, sweet-scented. Requires partial shade and moisture.

Oxalis floribunda (many-flowered wood-sorrel).—Pink.

Phlox procumbens (creeping phlox).—Lilac.

Ramondia pyrenaica. — Mauve. Grows somewhat like a primrose, and is best among rocks, in a crevice.

Saxifraga Aizoon (everlasting saxifrage).—White, with small red dots. *S. cotyledon* and *pyramidalis.* The leaves are only like a small rosette, but the flower-spike is 1 to 2 feet high, covered with small white flowers. *S. hypnoides.* Leaves in mossy tufts, flowers greenish-white. *S. longifolia.* Leaves form a large silvery

rosette, tall spike of white flowers; *crassifolia*, unlike the others, with large leaves and pink flowers, which come out in late spring (see page 71). *S. umbrosa* (London pride). Useful for edging, will grow anywhere (and there are a very great many other varieties).

Sedum kamtschaticum (orange stonecrop).—Orange flowers. *S. rupestre* (rock stonecrop). Yellow (and many other varieties).

Sempervivum arachnoideum (cobweb houseleek). — The leaves are like little rosettes, covered with white down like a cobweb. Flowers pink (many other varieties).

Symphiandra pendula.—White campanula-like flower.

Thymus (thyme). — The variegated and lemon-scented varieties.

Veronica candida (silvery speedwell).—Purplish-blue spikes of flower. Silvery leaves.

The two lists you have been given include only perennial hardy flowers. But there is another class, which look very bright and attractive all through the summer, but which require sowing every year, for they are either annual and only live for one summer, or else they are too tender to withstand the cold, and have to die like the annuals, even though they are perennial. It is to be hoped that you have

been at work during the spring sowing the seeds and pricking out the young plants, so that some of these showy flowers are ready to appear among the perennial ones, or even to fill beds assigned to themselves. All are from 9 to 18 inches high unless stated to be taller or low growing, and are either annuals, biennials, or perennials, which are best when raised from seed every two years.

Alonsoa myrtifolia.—Scarlet.

Antirrhinum (snapdragon). — Red, white, and yellow.

Campanula Medium (Canterbury bells). — Blue, white, and pink, 1 to 2 feet.

Centaurea cyanus (corn-cockle).—Blue.

Centaurea moschata (sweet sultan).—Yellow.

Chrysanthemum coronarium (yellow corn-daisy).

Chrysanthemum tricolor. — White, yellow, and bronze.

Clarkia elegans.—Mauve, purple, or pink.

Convolvulus tricolor (or *minor*).—Blue.

Coreopsis aristosa.—Orange yellow.

Cosmos bipinatus.—Reddish purple, tall.

Dianthus chinensis (Indian pinks).

,, (marguerite carnations).

Digitalis purpurea (foxglove).—Pink, also white, tall.

Eschscholtzia californica.—Orange or yellow.

Godetia.—Many varieties. Lady Albemarle, bright pink; The Bride, white.

Helianthus annuus (sunflowers). — Yellow, tall, 3 to 6 feet.

Helichrysum (everlastings). — Red, pink, bronze, yellow, white.

Iberis umbellata (candytuft).—Purple, mauve, crimson.

Lathyrus odoratus (sweet-pea). — White, pink, red, purple, mauve; tall, requiring sticks for support.

Linum grandiflorum (flax).—Scarlet.

Matthiola annua (stocks). — German ten-week and other varieties, white, pink, red, mauve, all sweet scented.

Nemesia strumosa.—All shades of yellow and orange, and blue also.

Nemophila insignis.—Blue, 6 to 8 inches.

Nigella damascena (love-in-a-mist).—Pale blue with feathery leaves.

Papaver (poppies).—French, Shirley, Mikado, and other kinds, all shades of red and pink, white, and deep purple.

Phlox Drummondi. — All shades of red, purple, and white.

Portulaca.—Single and double, red, yellow, orange, low growing, requires rich soil and sun.

Reseda odorata (mignonette).

Rhodanthe (small everlastings).—Pink.

Salpiglossis sinuata.—Every shade of red and purple, 2 feet.

Tagetes (both African and French marigolds), orange and yellow.

Tropæolum (both the nasturtiums, tall and dwarf), orange, bronze, or yellow; and canary creeper, yellow.

Zinnia.—Every shade of crimson, orange, and yellow.

It is difficult to class every kind of flower in lists, so there are a few to tell you about separately. One is the Marvel of Peru, a very old-fashioned flower, as Parkinson, who wrote about the paradise, or garden of pleasant flowers, as long ago as 1629, told his readers to grow it. The flowers are white and pink or yellow, and are star-shaped, with a long tube, and have a most delicious scent. It grows rather large and has tuberous roots like a dahlia, and in the same way ought to be taken up and kept dry and sheltered during the winter. I raised mine from seed, and have had some of the roots for many years, and every summer they are a delight.

Another plant, quite different, but very pretty and bright, is the *Montbretia.* There are several kinds rather alike. *Potsii* is the most common. They have spikes of orange and scarlet flowers, something like a gladiolus

both in flower and leaf, but more feathery. They are about 18 inches high, and increase from the root, and soon make a good patch in a bed. But after two or three years they should be moved and divided, or they will not flower so well. They are improved by a little manure in the autumn. There should be a place too for the gladiolus, with its brilliant flowers and sword-like leaf, from which it takes its name,—*gladius* being the Latin for a sword. In warm parts of England the bulbs can remain in the ground, but in colder counties it is wise to take them up each winter, and replant them in the spring. The scarlet one is called *Brenchleyensis*, and some of the most lovely shades of white and rose colour and red are among the gandavensis varieties and the French "Lemoine's hybrids."

Some of the climbers have already been mentioned[1] for covering a wall, but a few words more may be useful, as annual ones are easily grown, and will often cover an unsightly corner for part of the year. If you have a little railing or wire netting round your own garden, it will be improved by flowers trailing on it during the summer. I used always to do this in my small garden, and grew *Convolvulus major*, canary creeper, *Tropæolum Lobbianum*,

[1] See page 10.

and tall nasturtiums, for the purpose, and for the more shady part the variegated Japanese hop (*Humulus japonica*). Scarlet runners are often a help in making a tool-shed or railing pretty. But of course first and foremost for summer come the sweet-peas. All shades, pink, white, mauve, purple, and red, like many-coloured butterflies, held prisoners by the twining green—

> Here are sweet-peas, on tiptoe for a flight,
> With wings of gentle flush o'er delicate white,
> And taper fingers catching at all things,
> To bind them all about with tiny rings.—KEATS.

The everlasting peas have no scent, but their bunches of white, pink, or red flowers are so fine that they deserve a place, and will flower year after year. The common hop, too, comes up every year, unlike the Japanese one, which is annual. There are many kinds of vine or *Vitis* which make useful creepers. Besides the grape vine, which is very charming even when it does not fruit, there are several sorts which never have edible fruit, but which are none the less effective. The name of one kind is *Vitis riparia*, another with a hop-shaped leaf and bright blue berries in the autumn is called *Vitis humilifolia*, and there are many others. Allied to the vines are the Virginian creepers, both the common one (*Ampelopsis hederacea*),

and the small-leaved *Veitchi*, and an evergreen one, which is rather more tender, *sempervirens*.

A curious plant, with very large leaves and funny brown flowers like pipes hanging down is called "Dutchman's pipe," or *Aristolochia sipho*. It is very strong growing, and soon covers a large space.

Then there is the deliciously-scented white jasmine, and all the many honeysuckles, some of them evergreen, and some with scarlet trumpet flowers, and a Japanese kind called *flexuosa*, with pink and yellow flowers; and all the various clematis, with large purple, mauve, white, or small red flowers, besides the wild "travellers' joy."

Most of the bulbous plants, you will notice, come in the spring, and mention has already been made of them, but there is one family which belongs essentially to the summer, and far outshines all others—I mean lilies. Tall and stately, pure white or crowned with gold, they seem the very essence of balmy summer-time. Lilies have always held a special place among flowers. The lilies of the field, whose beautiful array surpassed Solomon in all his glory,[1] were called upon to teach a lesson of trust and humility, and since then lilies have been used

[1] The flower was probably really an anemone, as lilies do not grow wild in Palestine.

by writers, poets, and painters of all ages to typify all that is pure and beautiful—

> And the stately lilies stand,
> Fair in the silvery light,
> Like saintly vestals, pale in prayer:
> Their pure breath sanctifies the air,
> As its fragrance fills the night.
>
> JULIA C. R. DORR.

Some flowers must always be loved more than others from what they suggest to us, and the good and pleasant thoughts they bring. When we see a daisy—"Bright flower! whose home is everywhere"[1]—we think of it, not as a tiresome little weed, but recall the many joys of spring its first coming brings, and the friendly way its eye has looked on and cheered the sad and lonely. It has been said of these "little starry daisies," "The angels have planted them to remind us of the sky."[2]

A great many flowers have their special meaning, and have been used as emblems by poets and writers of all ages, though their special significance is not always the same. I remember seeing a French picture of some paper lying on a table with pen and ink all ready to write, and over the paper were scattered pansies for thoughts, as the French word *pensées* stands for both pansies and thoughts.

[1] Wordsworth. [2] Read.

In *Hamlet*, one of Shakespeare's plays, which you will read some day, Ophelia brings in some flowers, and of one of them she says, "There's rosemary, that's for remembrance," and then "There are pansies, that's for thoughts." Pansies are sometimes said to mean memory too, as in these little lines :—

Roses blushing red and white,
For delight ;
Honeysuckle wreaths above,
For love.
Dim, sweet-scented heliotrope,
For hope.
Shining lilies, tall and straight,
For royal state.
Dusky pansies, let them be
For memory ;
With violets of fragrant breath,
For death.

CHRISTINA ROSSETTI.

Although lilies are here said to be for royal state, the same poet, writing of them again, does not forget their other lesson :—

The lilies say, Behold how we
Preach, without words, of purity.

If you would have that quiet sermon preached in your gardens, you must learn, as all lessons have to be learnt, in a practical way how to grow lilies there. There are many kinds of lilies, and all beautiful, but some are much

easier to grow than others. Luckily the commonest white lily is one of the most beautiful, and it is very simple to make it thrive. It likes an ordinary garden soil. If the soil is very heavy it must be made to suit it by adding a little sand. The name of this well-known

LILIUM CANDIDUM
The Madonna Lily

white "Madonna lily" in gardener's catalogues. is *Lilium candidum*. All lilies should be planted in the autumn, and care should be taken not to bruise or break the bulbs. A very large number of lilies (chiefly from Japan) are imported every year to this country, and it is generally these imported roots that nurserymen

offer for sale, so you will find they are often a little crushed and damaged; and where this is the case, the broken scales should be pulled off the bulbs, or they soon decay in the ground and help to make the bulb itself wither. Lilies should be planted 5 or 6 inches deep. Most lilies like a little protection, especially for the young shoots as they begin to grow, and the best way to give them just enough of it is to plant them among small bushes or herbaceous plants, where the leaves afford the lilies all they need of shelter. Many kinds (especially *L. auratum*) grow best of all among rhododendrons.

The white trumpet lily is *L. longiflorum*, and is often seen growing in pots, and though some varieties are not quite hardy, in warm places it will grow well in a border. *Harrisi* is pure white and hardy. *L. auratum*, the beautiful Japanese white and gold lily, with a strong fragrant scent, is generally easily grown for one or two years, but it is difficult to make the bulbs quite at home. They like a good rich soil, and though they enjoy being among sheltering bushes, they do not like the good soil being robbed from them, and should be given a top-dressing of manure to make up for what the bushes take away. *L. speciosum* is another lovely Japanese kind, which is hardy in most places, in well-drained not too heavy soil, in

a sunny sheltered place. The flowers are white and rosy pink, and come out late in the summer and last into the autumn. One very beautiful lily is almost beyond the scope of any child's garden. It is very large, as its name implies, *L. giganteum.* It grows in sheltered woodland situations and bears large flowers, white with a little purple, on stems 6 to 10 feet high. Quite another type of lily among those simple to grow are the Turk's cap or Martagon lilies. The flowers are a dull purplish red, with petals quaintly turned back, and there are both white and yellow varieties, and also a bright scarlet, called *L. chalcedonicum.* They like partial shade.

I do not know what particular lilies the poet refers to in the following lines, but I will give you the names of three other kinds, any one of which would make a red-gold crown to a summer's day.

Clustered lilies in the shadows,
Lap't in golden ease they stand,
Rarest flower in all the meadows,
Richest flower in all the land.
Royal lilies in the sunlight,
Brave with summer's fair array;
Drowsy thro' the evening silence,
Crown of all the August day!

The first name is *L. croceum*, the orange lily. It is strong and hardy, and has a head of

several bright blooms. *L. umbellatum* in varying shades of yellow and orange belongs to the same type. The next group are the *L. elegans*, or more commonly called *Thunbergianum*. They do not grow very tall, but they have many leaves on the stem, and large flowers in a great variety of shades of deep orange and crimson, and are very beautiful and striking. Then last, but not least, are the well-known tiger-lilies, *L. tigrinum*. They are quite simple to grow, and also to increase, as the tiny dark bulblets which come on the stem near where the leaves spring from, will grow and make new plants.

To try to grow many of the other lilies you may see described in gardeners' catalogues, such as *Browni* or *Krameri*, would only lead to disappointment and failure, unless you really try to study the wants of lilies very thoroughly, so I will not tell you about them. If you even have the first and the last of those I have named (*candidum* and *tigrinum*), the Madonna and the tiger lilies, you need not feel dissatisfied.

I wonder if you have noticed that, in spite of the many flowers I have been telling you of which adorn the summer, some of them old favourites, and some, it may be, new to you, that I have missed what is perhaps the most important of all. I think you can guess the one I mean—for

Of all the garden flowers,
The fairest is the rose.

MOIR.

The lily has an air,
And the snowdrop a grace,
And the sweet-pea a way,
And the heartsease a face;
Yet there's nothing like the rose
When she blows.

CHRISTINA ROSSETTI.

But there is so much to be said about the rose—even more than about the lilies—that it deserves some pages all to itself. The rose is said to be the Queen of flowers, as the lion is King of beasts. For beauty of colour, form, and scent, she stands alone, and she is armed too with sharp prickles to protect her. A poet over two hundred and fifty years ago called her

The blushing rose, the Queen of Flowers,
And best of Flora's beauty.

The rose plays its part in English literature as a type of hope, beauty, or bravery, just as the lilies typify purity or the violet modesty.

The rose is fairest when 'tis budding new,
And hope is brightest when it dawns from fears;
The rose is sweetest washed with morning dew,
And love is loveliest when embalmed in tears.
Oh! wilding rose, whom fancy thus endears,
Emblem of hope and love through future years.

SCOTT.

The rose is, too, an emblem of life—its joys and sorrows; the bright flowers of the rose are our happy days and sweetest pleasures; its thorns are our sorrows and tears. But just as every rose has its thorns and flowers, so we try

ROSE CLIMBING ON A TREE

to find brightness amid sorrow, and spread roses of happiness around us.

> As on each rose a thorn there grows,
> Strive that no thorn shall be without its rose.

These roses of goodness do not die, but their sweet odours refresh us all through life, and

their memory lives on, after we have passed away, just as the petals of real roses, even though withered and dead, retain

> All the fragrance of summer,
> When summer is gone.
>
> MOORE.

As the rose is the emblem of England, it must be specially dear to every English child. The only kinds which grow wild in Great Britain are the single dog-roses, pink and white, and the sweet-briar. The many large double roses with which we are now so familiar have all come from abroad, most of them having been brought from China, and from far away in Eastern Asia, during the last hundred years. Long ago in England a few double ones were grown in the old-fashioned stiff-walled gardens, and they were very highly prized, such as the damask, the Provence, and the moss rose. The poets of olden time—Chaucer, Spenser, and Shakespeare—often sang of their beauty, for said Chaucer—

> I love well sweet roses red.

A quaint survival of the time when roses were the badge of the two contending parties in England, during the civil wars, is the striped red and white York and Lancaster rose. The

two roses, you may remember, were combined in a much more conventional way in 1485, as the badge of the Tudors, and these Tudor roses are often to be seen carved or emblazoned on the buildings of that date. This double rose was formed of Henry the Seventh's Lancastrian badge joined with the white rose of Elizabeth of York, or, as the rhyme puts it—

> King Henry the Seventh did the roses unite:
> His own was the red, and his wife's was the white.

A very large number of the roses most familiar in gardens to-day have been formed, like the Tudor rose, by combining two of the "type" roses that grow wild in some distant part of the world, and producing what is called a "garden hybrid." Gardeners are so skilful in doing this (especially French gardeners) that every year there are new roses being brought out to add to the many hundreds that already exist. Comparatively few of the roses now grown in gardens are what are called "type roses," or those which have not been altered by cultivation, although some of these types are very beautiful and sweet, such as the cinnamon rose or the Macartney rose. But roses are still classed more or less with the groups under the names of the kind from which they sprang, such as *Rosa gallica*, or

ROSE TRAINED ON POSTS

Souvenir de Paul Neron

R. indica. But to learn all this would be both tedious and difficult for a beginner. The easiest plan is to remember these few distinctions—the hybrid perpetuals; the tea-scented and noisette; China roses and briars; and I will give you the names of some in each of these classes, and also of one or two good climbing roses (which may belong to one of these or some smaller class) which are suitable for almost any garden; but at the same time you must remember there are so very many to choose from that you could make several lists of roses, all perhaps equally good, and yet each containing a new set of names.

HYBRID PERPETUAL AND HYBRID TEAS

Baroness Rothschild	Pale pink.
Boule de Neige	White.
Captain Christy	Blush pink.
Duke of Edinburgh	Deep bright red.
Dupuy Jamain	Bright red.
Glory of Cheshunt	Shaded crimson.
La France	Pink.
Madame Victor Verdier	Light crimson.
Merveille de Lyon	White.
Pride of Waltham	Bright pink.
Prince Camille de Rohan	Dark crimson.
Ulrich Brunner	Bright red.
Viscountess Folkestone	Pale pink.

Tea and Noisette Roses and China

Anna Olivier	Pinkish, creamy buff, and flesh-colour.
Catherine Mermet	Creamy rose.
Hon. Edith Gifford	Creamy white and pink.
Laurette Messimy	Apricot yellow.
L'Ideal	Red, shading to yellow.
Madame Eugénie Resal	Coppery pink.
Madame Lambard.	Pink, shading to orange.
Marie Van Houtte	Lemon yellow and pink.
Perle des Jardins	Yellow.
Princesse de Sagan	Crimson.
Rubens	Creamy white.
Souvenir d'un Ami	Pale pink.

Good Climbing Roses

Blairii No. 2	Blush pink.
Claire Jacquier	Nankeen yellow.
Cramoisie Supérieure	Crimson.
Crimson Rambler	Crimson.
Duchesse d'Auerstadt (or Rêve d'Or or Belle Lyonnaise)	Buff yellow.

Dundee Rambler	White.
Félicité Perpétué	White.
Gloire de Dijon	Buff yellow.
Longworth Rambler	Crimson.
Paul's Carmine Pillar	Crimson (single).
The Garland	Pink and white.
William Allen Richardson	Orange.

The small Scotch roses.

Moss-roses, white and red.

Briars, Austrian and Lord Penzance's varieties.

Japanese or *Rosa rugosa*. White and pink.

An American kind, *Rosa Wichuriana*, that creeps flat on the ground.

If you want to possess some of the lovely roses in these lists, you must learn something of the cultivation of them. The best time to plant roses is about Michaelmas, but if the weather is open the planting can take place any time before Christmas. They like a good, rather heavy soil, not a poor and sandy one, and in some parts of England will produce much finer blooms than in others, but they will grow almost anywhere if, when planted in naturally poor soil, it is well dug and improved by the addition of some manure. It may be difficult for children to procure rose trees for their gardens, so I will tell you the various

ways of doing so, all of which I tried with success when I was a small child myself. Of course the most simple way is to buy a plant from a nursery gardener. They sell not only every kind of rose, but many forms of plants of each variety. There are what are called "standards" or "half standards," with a more or less tall "stock" or stem, generally a briar with a large bushy head of the choice roses at the top; or there are "dwarfs," those growing on their own roots from the ground. Which form is best depends on where it is to be planted and what kind of garden it is to go in. Having been given half-a-crown when I was about ten years old, I bought with it a "half standard" "Duke of Edinburgh," a fine deep-red rose which made the centre of the Maltese cross-shaped bed in the middle of the garden, and a "dwarf" pink moss-rose for one of the corner beds. I was extremely proud of the half standard, and I still think it was the most suitable for that position, even though, after flowering for many years, it came to an untimely end. A very hard winter came, and the frost killed the top of my "Duke of Edinburgh," and when the roots began to recover and shoot up, great was my grief to find they were only the common briar on which the rose had been grafted. With the moss-rose it was

different. All the sprouts from the roots bore the same sweet blooms. Children must use their own judgment in buying, remembering the advantages and disadvantages of each form. To make a pair to my moss-rose I was allowed to dig near a Scotch briar which bore tiny little pink roses, with a delicious scent, and to cut off a sucker from the large bush with sufficient fibres to enable it to be transplanted and root in my garden. I still had room for two more rose trees, and those I got in two more different ways. One, a pink rose, I grew from a cutting, and did not know its name at the time, but now I fancy it was "Paul Neron." The other, a Gloire de Dijon, I budded on a briar. One of my sisters had a picturesque wild garden on a small island, and there we grew roses on their own roots, chiefly climbers, one on an archway to form an entrance, some on the trees, and let others fall over the banks towards the water, so that their pretty heads were reflected.

To grow rose cuttings is sometimes rather disappointing, as they will often grow well through the winter after they are put in early in the autumn, but when cold weather comes in the spring they die. But if you try several, one or two are almost sure to grow. Cuttings must be nice, strong shoots, not old and hard, and yet not the most tender young sprouts.

THE ENTRANCE TO THE ISLAND GARDEN

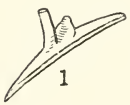
They should be cut off with a sharp knife just below one of the young leaf buds, and the lower leaves removed. These pieces must be planted in a place that is not too sunny, as they cannot be moved to their permanent homes until the following autumn, by which time the survivors will be well rooted. But of course they will still be quite small, and you must not expect flowers on them at once.

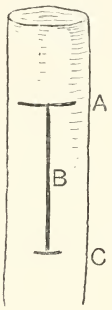
The last way of procuring roses is more difficult still, and many failures must be looked for, but the process of "budding" is such a fascinating one, I feel sure every child who tries to do it will be as pleased as I was, especially if the bud "takes" or grows. The first thing necessary is to have some kind of common rose or wild briar on which to "bud" the more beautiful one. In nursery gardens a kind of rose called "manetti" is generally used. I found I could easily grow those from cuttings given me by an old nursery-gardener in the neighbourhood, but some years have to elapse before the cutting has grown large enough to bud, and the bud in its turn grown big enough to flower. The other plan is to use a wild dog-rose for the "stock." One has to hunt about the hedgerows and woods, and notice the most suitable briars of the height required. They can be budded on tall stems to make standards,

or near the ground for dwarf trees. If you are sure that the briar in the wood will not be disturbed, it can be budded before it is removed to your garden; but the safer plan is to take the briar up one October and plant it where it is to remain in the garden, and bud it the following July. The briar must be prepared by having its branches cut back, and only those it is intended to bud left on—perhaps two or three on one briar. The actual process of "budding" is difficult, and your best way of learning is to get a kind gardener to show you (as I did); but if you have no one to help you, you might try by yourself from these directions.

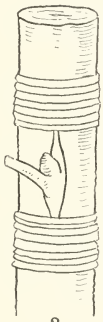
Get a "bud" of some good garden rose—that is, not a flower-bud, but a small shoot of growth just beginning to sprout at the base of a leaf—and cut it out, leaving some of the stem of the rose like a little wedge, and then cut off the large green leaf (Fig. 1). Then go to the wild rose, and if you have not prepared it already, select a nice strong branch (removing all the branches you are not going to bud), cut off the end, leaving the branch the length you require, and, at about 6 inches from the cut end of the branch, make a cut across the bark, about half-way round the stem, being careful to go through the bark only and not to touch the hard wood inside (Fig. 2, A); then

make a slit downwards, starting from the middle of the first cut, about $1\frac{1}{2}$ inches long (Fig. 2, B), and make another cut across the end of the slit like the first cut, only smaller (Fig. 2, C). Then raise the bark up gently, opening it like two little doors, and put the bud you took from the garden rose inside the little doors, and tie them down, above and





2


3

below the bud, firmly, but not too tight (Fig. 3). Tie with matting or wool, but do not use hard string that would cut the bark. If the bud keeps green and fresh, you will know it is going to grow; if it does not "take," the bud will soon look withered and black. Do not be discouraged if your first bud does not take, as you may succeed another time. Like all other work connected with gardening, budding needs great

care and patience, but it will well repay your trouble if you succeed.[1]

Although spring and autumn are the busiest seasons, yet I think I have shown how much you can find to do all through the summer months; but there will be days of idleness too, hot sultry days perhaps, when you see the leaden clouds coming up, and feel you need not expend your energy in watering, as the heavy raindrops will soon do it so much better. Then it is pleasant to sit and watch the flowers, and the busy bees, and the white butterflies fluttering round. The flowers themselves keep regular hours. They are not wide awake all the twenty-four hours of each day. Some of them go to bed very early—long before the sun has set they fold up their petals for the night; others wait till the dew is falling, while others choose that time for waking up.

> They know the time to go,
> The fairy clocks strike their inaudible hour
> In field and woodland, and each punctual flower
> Bows at the signal an obedient head,
> And hastes to go to bed.
>
> SUSAN COOLIDGE, *Time to Go.*

Daisies are most punctual, and sunset finds them all asleep, and they wake up with the sun. The French name for the "Star of Bethlehem" (*Ornithogalum*) is *Dame d'onze heures*, from

[1] Roses will grow from seed, and some, especially *Rosa rugosa*, do well, but it is too slow to recommend to children.

their hour of waking, and I have heard them called "eleven o'clocks" in England too. There is a pretty little scarlet starlike flower,[1] which is very common in many parts of Rhodesia. In travelling over hundreds of miles of country there, my husband and I could always tell when it was ten o'clock, as these lazy little flowers, although the sun was scorching hot by six in the morning, were always tightly closed till ten.

Nature abounds with such curiosities, but it is much more amusing to find them out for one's self than to read about them, so you must remember to be wide awake the hours you spend in your garden, and notice all you can, or you will not have enjoyed summer to the full. All pleasant (as well as disagreeable) things come to an end, and summer flits by, leaving us richer by the memory of its pleasant days, its glorious sunshine, and its myriad flowers, and it must ever be with a sigh that we say good-bye when autumn's chilly breath first taints the balmy air.

> Delightful summer! then adieu,
> Till thou shalt visit us anew.
> But who without regretful sigh,
> Can say adieu, and see thee fly?
>
> HOOD, *Departure of Summer.*

[1] *Wormskioldia longipeduncula.*

V

AUTUMN

Blossoms, gentle blossoms,
Do not wither yet :
Still for you the sun shines,
Still the dews are wet :—
Nay, but fade and wither fast,
Fruit must come at last.

ADELAIDE PROCTER.

PUPILS' GARDENS AT THE SCHOOL, WYCOMBE ABBEY

AUTUMN

> Summer hath a close,
> And pansies bloom not in the snows,[1]

is a pretty sentiment, and the words are true; but yet they do not seem to contain the whole truth, for they ignore that lovely season of golden sheaves and golden leaves that crowns the year. As spring is a time of hope and expectancy, so autumn is one of fulfilment. Everything in nature has finished its work, and it is the season of completeness and

[1] Elizabeth Barrett Browning.

perfection before the winter or time of decay. Autumn is like the crimson sunset glow of evening, which comes before the chilly darkness of night.

I am very fond of these following lines in a poem by Bryant, called "The Death of the Flowers," although when I learnt them as a child I thought the verses very long to remember, even though they had been specially selected because of my love of flowers. They express so well the beauty of each season of the year :—

The windflower and the violet, they perished long ago,
And the briar rose and the orchis died amid the summer glow;
But on the hill the golden-rod, and the aster in the wood,
And the yellow sunflower by the brook, in autumn beauty stood,
Till fell the frost from the clear, cold heaven, as falls the plague on men,
And the brightness of their smile was gone from upland glade and glen.

Everything has changed since the spring. The apple boughs are no longer covered with blossom, but laden with rosy-cheeked fruit ; the grass-like blades of corn are now tall ears of grain ; the horse-chestnuts have lost their look of Christmas trees with all the candles lit, and have instead the large green husks bursting and showing the polished brown nuts inside.

Although nature has done its work, and the flowers are dying and the seeds are ripening, it is just the very time when the gardener must be busiest. There are many delightful autumn days in which to work, when the air is too chilly to sit out and do nothing, but before the frost has disfigured the waning beauty of the garden. First there are cuttings to be taken, and layers to be removed. The carnations that were layered in July will have rooted, and each little plant can now be cut away from the parent and planted where it is to remain during the winter. A number of flowers are easily increased by making cuttings, and the majority of these have to be taken in the early autumn. If children are fortunate enough to possess a small frame, they must now make up the soil and prepare it for the cuttings, which must then be planted in rows; but even without a frame a great many will strike out in the garden, especially if a little protection of branches and brackens is given to help some of the more tender ones through the hardest part of the winter. Children in the warmer districts of England could in this way grow calceolarias, chrysanthemums, pentstemons, or scented verbenas, and many half-hardy cuttings that would require a frame in the North. Violas and pansies are very

A BORDER IN EARLY SEPTEMBER

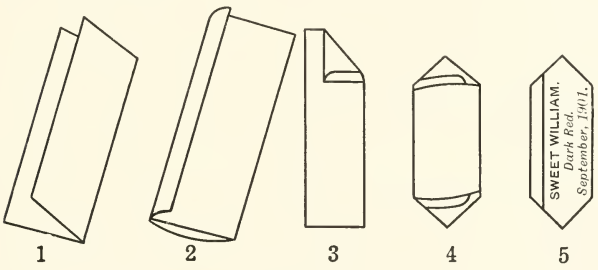
easy to strike anywhere, and the little pieces that are put in now will flower better next year than the old plants. The way to take a cutting is to select a nice young growth, not a hard, straggling old shoot, and cut it straight across, just below a joint where young leaves are sprouting. Cut the leaves off, but do not injure the joint, and nip off any flower-buds. When the end that has been cut off is put in the soil, it will throw out roots instead of leaves, and unless it is kept too dry and gets scorched by the sun, or has too much moisture and gets mouldy and "damps off," it will soon begin to get nourishment by its new roots and form a healthy little plant. Very often it is easy to obtain cuttings of flowers and shrubs from other gardens. As a rule, gardeners are very kind in that way, and would not grudge giving you a little slip of a plant you admired, which you could take home and try to strike. Myrtle is one of the most simple things to strike; it forms roots so readily that it will sometimes do so when kept long enough in water. Several flowering shrubs, such as weigelias, veronicas, or fuchsias, easily strike, also lavender, southernwood, and rosemary, all so sweet-smelling.

There are two other ways of propagating plants in autumn—by seed or by division.

Seeds should be collected as soon as they are ripe, as if they are not gathered they will either fall to the ground themselves, when, if they happen to grow, they will probably be in a wrong place; or they may get spoiled by autumn rain and fog; or, if large seeds, they will be taken by the birds. This is so much to be guarded against in the case of sunflowers that a very sharp look-out must be kept. The birds will barely allow the seeds to ripen before they perch on the heavy heads so neatly packed full of seed, and pick out every one. They get so bold, or are so absorbed in their work, that they will go on stealing even when the owner of the seeds is close by. I have watched dear, naughty little black-caps hanging upside down on to a sunflower head, tugging away at the seeds, when I have been working only two or three yards away. With a little care children could save enough seed from their annual plants each season to fill the garden the following year. Marigolds, nasturtiums, sweet-peas, corn-cockles, mignonette, poppies, and many others, would in all probability have enough seed for the purpose, and then money would only have to be spent in the spring on newer or more choice seeds or plants.

The way to collect seed is generally to pick off the whole pod or seed-vessel as you walk

round the garden, then to sit down and shake out the seed on to a piece of paper, blowing away any chaff, and with some of the larger seed-vessels (especially poppies) being careful not to collect an earwig at the same time as the seed! It must then be put into neat little packets, and the name and date written on each, and stored away in some dry place (a box taken care of in the house) for the winter.



SEED PACKETS

The way to make the best kind of seed packet is to take a piece of paper according to the size and quantity of the seed (a half sheet of note-paper torn in two across the middle is a convenient size); fold this in two (Fig. 1), and double a narrow piece of the two edges together (Fig. 2), folding neatly twice (as you do when you turn down a hem); turn the paper over so that the "hem" is underneath, then fold back a three-cornered piece at one end, so that a small piece

of the "hem" is doubled back (Fig. 3), and then fold over the point left and tuck it under the edge of the "hem." Fill with seeds, and then fold up the other end in the same way (Fig. 4), turn over the packet, and write the name and date on it. It is correct to put a date, as some seeds are better if sown within a shorter time of gathering than others.

If you are specially anxious to collect the seed of any particular flower, it will require careful watching. Perhaps it may have to be tied up to a stick to prevent the stem being bent or broken, or it may require to have a small bit of muslin covered over it to keep the greedy birds away. Slugs are a great trouble, and will frequently destroy seeds. They are very fond of pansy seed, and it is necessary to hunt for them very carefully. Even after the most minute scrutiny I used to find they would evade me, and eat up my choicest pansy seed-head, until I hit upon a plan of stopping their progress up the stem by putting a large paper collar round it. There are many dodges for catching slugs, but I used to find one of the most effectual was to put down a saucer of milk, into which they crawled, but could not get out. I have killed many dozens by this means—not a very pleasant operation.

The third way of increasing plants is by

division. This of course only applies to perennial ones. Far from injuring them, the greater number of plants are all the better for it. There are, however, a few which prefer to be left alone. Peonies, for instance, do not like being disturbed; but it is only by long experience we can learn all about gardening, and all the various peculiarities of plants, and it would be impossible to tell you all the exceptions. It is best for you to learn that nearly all the plants in a herbaceous bed (or bed of large perennials) are improved by being dug up every few years. When the plants are lifted they can be divided up into smaller plants, according to their size. A phlox, for instance, or perennial sunflower, or a Michaelmas daisy, grows so large that it can often be cut into several fair-sized plants, which soon grow big and equal to the original one. I used to watch a gardener doing this, and be quite distressed when I saw the spade go right into a large plant and chop off two or three little blocks; I felt they would never survive such cruel treatment. But one day I had a white phlox given to me, just a little square lump chopped off the corner of a large mass, and before three years were gone I was digging up the plant myself, and with all the strength I could muster (for it is a tough job sometimes) I was boldly cutting up my

PHLOX AND EVENING PRIMROSE

plant and filling a good-sized bed with the pieces to form a group of white phloxes. But all plants will not stand such summary treatment; they must be lifted with care, and gently pulled apart, and in these cases the fingers and thumbs are much more suitable implements than spades. For instance, a large round clump of aubretia could be divided into enough little plants to make a row round a bed, which by another year would form a good wide border, whereas if it were left alone it would grow straggling and with the middle withered and bare, and it would not flower so well. This overhauling of the beds is one of the chief employments in the autumn, but of course it should not be done until the flowering time of the plants is over. If they are not taken up, and the whole bed or border re-dug, it must be carefully weeded, and the soil thoroughly turned, and, if possible, a little top-dressing of good new soil or manure added. This is a great help to many plants. Roses benefit much by this treatment, and some of the more tender plants are carried through the winter by the "top-dressing" they receive in the autumn.

The chief object in gardening must always be to have as many things in flower as possible, and to enjoy the early autumn endeavours must be made to have plants which go on flowering

until the frost destroys them, or, better still, some be grown that even the cruel nipping frost will not altogether spoil. One of the prettiest autumn flowers is the white Japanese anemone. There are some pink varieties, but they are not quite so attractive as the pure white. They grow tall (about three feet), and are suitable for a large bed or in a wild garden. The way to increase them is to divide their roots after they have died down, and if you were given even quite a small piece of root, it would soon make you a nice plant. Another autumn plant which grows easily from a small piece is *Sedum spectabile*, a very large stonecrop, a foot or more high, with round flat heads of pink flowers. It is curious to see how fond butterflies are of these flowers. I have often seen so many of the handsome Admiral butterflies sitting on them that they looked like a rich brown instead of a pink flower. Any kind of garden suits these plants. Some varieties of monkshood blossom late in the year. They are large and suited to wild gardens, and do not mind a little shade. They are rather like the common monkshood, which flowers earlier, and are called the "autumn" and the "Japanese" varieties (*Aconitum autumnale* and *A. japonicum*). The bright "red-hot pokers," (*Kniphofias*) flower in the late summer and

autumn, and are very fine in a wild garden or large bed. Other good large plants which the first frost will not hurt are *Helenium autumnale*, with a yellow, daisy-shaped flower, and *Helenium atropurpureum striata*, with red, brown, and yellow streaked stars and purplish black centre. The most useful of all autumn plants, as they are so easy to grow, are the Michaelmas daisies, a kind of aster. There are really good purple ones, and mauve, white, and pinkish varieties. Many of them have names, such as "Mabel," a bright mauve, "Chapmani," a small white, "Arcturus," a deep blue purple, "formosa," a pale pink, "rubra," a reddish purple, but many others with no special names are just as good. They grow easily from divisions, and it is possible to get nice large plants very soon from small pieces begged for, when a gardener is digging over a border. Chrysanthemums can be got in the same way or by cuttings. The great big flowers like mop-heads you may know as chrysanthemums will not do out of doors, as their large size is only obtained by careful cultivation in pots, but the small-flowered kinds, red, yellow, white, pink, and bronze, do quite well, and nothing could be prettier than these bright flowers in the October sunshine. The many-coloured hollyhocks also flower late in the summer, on very large, tall

spikes, and they can be raised from seed. The dazzling red lobelias, *Lobelia cardinalis* and *fulgens*, look splendid late in the year, but it might be difficult for children to grow them, as in many parts of England there is always a risk that the frost will kill them, and in a tiny garden there is no place in which the plants can be stored for the winter. They like a good deal of moisture and rich soil.

It is more difficult to name many dwarf or low-growing plants for autumn flowering. There is, however, nothing better for a small, shady garden than cyclamen (see page 29); two sorts, the European and the ivy-leaved (*C. hederifolium*), keep on sending up dear little pink flowers until late November. The best way to raise plants is by seed, as they form seed very freely and they cannot be divided, as they have little round tubers which must not be cut up. Another plant easily raised from seed, which makes a good show in the autumn and only grows about six inches high, is *Silene schafta*, which bears a profusion of mauvish pink flowers. In warm dry places a small creeping convolvulus with bright pale mauve flowers will do well until late autumn, and can be raised from a penny packet of seed. It is called *Convolvulus mauritanicus*. It will also grow from cuttings. Besides these, many annuals go on flowering

until the frost cuts them down; marigolds, eschscholtzia, coreopsis, *Phlox Drummondi*, zinnias, verbenas, godetias, canary creeper, and everlastings are among the number.

One of the best-known autumn flowering bulbs is the saffron or autumn crocus or colchicum. It has a mauve flower, but there are some named varieties of deeper purple shades, and a white; the leaves of all of them are large and glossy, come up in the spring, and there are none to be seen at the same time as the flowers. *Sternbergia lutea* is a yellow flowering crocus-like bulb which is very pretty, but children would find it more difficult to procure. An autumn bulb easy to grow is *Hyacinthus candicans*, which has little white bell-shaped flowers, and grows three or four feet high. There are also late flowering kinds of gladiolus, with tall spikes of brilliant flowers of bright scarlet or many shades of pink.

One more plant that I will tell you of is different from all these others, as it is the seed-vessels that are showy, and not the flower — the winter cherry, or *Physalis*. These seeds are enclosed in little bright scarlet bags about an inch long, which hang round a plant about a foot high. There is a new variety with its red bags twice the size, growing on a taller stem, called *Physalis franchetti*.

HYACINTHUS CANDICANS AND HOLLYHOCKS

Any one of these seeds will grow if planted in a sunny place. If cut when ripe and dried they will last all the winter indoors. It is very nice to have a few of these dry bouquets when there are no flowers in the garden, but it is better still to take some little plant into the house and grow it there. If you sow the seed of a marguerite carnation in the early spring, it will grow into a fair-sized plant and flower in your garden in the summer. When the days begin to get cold, you can dig it up and put it in a pot and keep it indoors, and it will go on flowering all the winter. If you have not prepared any plants for transplanting, you might still collect a few horse-chestnuts and acorns when they are ripe and drop off the trees, and put them in a soup plate or a saucer with some moss over them, with just a little earth at the bottom of the plate. Keep them moist, not too wet, or they will get mouldy, and stand the plate somewhere in the house, and they will form a pretty little forest in the spring, and you will find much interest in watching them growing when nature out of doors is asleep.

Gardeners must be always looking ahead, as, if they did not prepare for summer and autumn in the early spring, there would be no flowers when the warm weather came, and

nothing to cheer the closing days of the year. You must in the same way get ready for the spring months beforehand, and make your preparations in good time, if you want to have bright gardens as soon as the sunshine and long days return. All the spring bulbs—daffodils, crocus, squills, hyacinths, tulips, snowdrops — must be planted now. They should all be put in before the beginning of November. There is an old rhyme which tells us of this, and it would be well to remember it in the autumn :—

> If you want your garden to be bright and gay,
> Have all your bulbs in before Lord Mayor's day.

That is the 9th of November—the King's birthday—so think of your bulbs in October. You can begin planting earlier, even in August, and for some bulbs, especially daffodils, it is far better to do so ; but it is difficult in a small garden, as the ground is covered with annuals, and there is no room, and, if the bulbs are to go in the grass, the ground is often too hard then for children to dig. Bulbs must be carefully planted, and, of course, put in the right way up—the pointed part, out of which the leaves will grow, upwards—and they must not be buried too deeply. According to the size of the bulb, they will require from one and a half to six inches of soil over them. They

should be about the same distance apart; snowdrops and other small bulbs, two inches; daffodils, six inches or more. A label or little piece of stick should, as a rule, be put to mark the centre of a patch, if the bulbs are planted in groups of from three to a dozen, to warn spades and forks when the beds are being dug that there is danger of cutting a bulb in two. If you want to have bulbs in the house, such as hyacinths or a group of tulips or narcissus, they should be planted early, as you naturally would prefer to have your plants indoors in flower sooner than those in your garden. Put them in pots in August or September, and cover them over out of doors in a warm corner with ashes, if you can get some, and let them remain hidden up until the points of the young growth begin to appear above the pot; then take them into the house.

Not only bulbs should be put in, but almost all planting is best when done in the autumn. Any time during that season is suitable, as long as the weather is mild and open, and the ground not locked up by frost. But do not choose a very wet day or when the ground is soaked by rain, as you might catch cold and your plants might do so also. The ground then is so sticky that plants cannot be properly planted. Their little roots must all be care-

fully spread out and well covered with fine soil, then filled in with the rest of the earth, and gently pressed down with the foot on all sides. In putting in large bushes or rose-trees you must be particularly careful that good soil is packed under and round all the widespreading roots, so that they do not get crushed or broken when the rest of the soil goes on above and is stamped down. Hold the plant upright with one hand while you are pressing the soil down round it. If you budded any roses away from the garden, Michaelmas is the time to bring them in. Any bushes or creepers, and all the spring and summer flowering herbaceous plants which I have told you about, can be planted now. In short, autumn is the right time to do all that sort of work.

A few seeds can be sown too in September for flowering in early spring, such as forget-me-nots, and two cheery little pink flowers, *Silene alpestris* and *saponaria*, besides others already mentioned in the lists of spring flowers.

There is a great deal of "tidying up" to be done in the autumn, as the annuals which have shown their flowers so bravely all the summer die and wither, and after their seeds have been collected, they must be pulled up by the roots and taken away. All the tall stems of the perennial plants look very rough and wild in a

bed, and should be carefully cut away, and any stakes used for supports must be pulled up too, and the best kept for use another year, and the rest carried off to the leaf-heap.

In October

> The trees are Indian princes,
> But soon they turn to ghosts,

and as they shed their golden leaves you must brush them up, and keep the grass and paths clear of them. Sometimes a sharp frost comes suddenly and most of the leaves fall in a few days, but more often each windy day brings down a few :—

> The wild wind bereaves
> The trees of their leaves,
> And scatters them over the green ;
> And then you must rush
> With basket and brush,
> And make the place fit to be seen.

It is a good thing when the leaves come down in dry clear weather to collect a little heap in some hidden corner, under bushes or anywhere that you can keep them fairly dry. If possible, get some withered bracken too, and lay a few sticks on the top to keep them from blowing about. You will find them very handy when the weather gets really cold, and tender plants want protection. It is not a good thing to cover up too early, as the moist foggy days

rot the leaves, and they in turn cause the plant to damp off.

Children's gardens are often so shady that you will have a great deal of work to keep them tidy in autumn, but you will find it a good occupation on some of the wild, sad autumn days. How often I have swept up the chestnut leaves that fell from great patriarchal trees that overlooked my little plot, while the words of Christina Rossetti's nursery song rang in my head :—

> The wind has such a rainy sound,
> Moaning through the town ;
> The sea has such a windy sound ;
> Will the ships go down ?
> The apples in the orchard
> Tumble from their tree ;
> Oh, will the ships go down, go down,
> In the windy sea ?

It is not often that a child's garden is large enough to boast of apple trees of its own, but if there was space enough, it would certainly be a pleasure to have one. My first little garden was much too small, but later on I had room for an apple tree, and I planted also a medlar, a quince, and an almond—the medlar because I liked the fruit, the almond for the sake of its blossom, and the quince was a fancy of mine, as the fruit is so rare ; yet how often one sees the picture of it doing duty for Q in alpha-

betical picture books. But it is not satisfactory to plant, as very many years must pass before it will bear any fruit. Mine took quite ten years.

But there are other fruits that do not take so long to grow, or so much room. There are strawberries, which are such pretty-looking plants, and easily managed. If you want them, the best way is to beg for what are called "runners" from the strawberry plants in the kitchen garden. There are almost sure to be some to spare. These, if planted in September, having been rooted like layers of carnations, will fruit the next summer. A fanciful way of growing strawberries has been tried lately, and I think some children might manage it, even if they had no real gardens. An old barrel is all that is wanted, and a piece of drain-pipe. Holes are cut in the barrel all round at intervals like a pigeon-cot ; the drainage up the middle of the barrel ensures the plants at the top and those below having an equal share of water. The strawberries are planted at each hole, and earth put over them till the barrel is full, and they hang out their leaves and then their bright scarlet fruit, and completely cover the old barrel.

In a shady garden, wild strawberries will grow well and fruit, even if there is not sufficient sun for the larger kinds. If children

GRAPE VINE AS A CREEPER

have a little strip of garden against a wall, they could, of course, have a fruit tree trained against it, instead of any of the climbers I have described, but it requires much care and pruning to get it to bear fruit well, and probably children would have too much difficulty in growing good peaches, plums, or apricots; cherries or red currants, however, might be managed on a north wall. In a wild garden the new American kinds of bramble are easy to grow. They make pretty climbers, and have much larger fruit than the wild English bramble, and another easy fruit to manage is the Japanese wineberry. The plant is something like a bramble, with fruit more like a raspberry, although not quite such a good flavour, but of a lovely clear red colour when ripe. It could be made to trail over a bush, or else should have a few sticks to support it.

Fruit-growing in a small garden has its disadvantages, and not the least of them is that it often spoils the friendly relations between the owner of the garden and the bird visitors. They are indeed mischievous where fruit is concerned, and not only will they peck off the ripe fruit in autumn, but they will often destroy the buds in spring, so that there never is any fruit at all. Bullfinches are really naughty, and if left undisturbed to play about the garden,

there is little chance of a crop. I have had all my medlars taken by them, but I was so fond of the birds that I always forgave them; they looked so sweet, chirping on the trees or hopping about. Robins are the tamest of all birds, and I do not think they do any damage. They will come quite close and beg for worms as the new soil is turned up. If there are none in sight, I have often called a robin down by clicking two coins together—a sixpence tapped on a shilling does best; but of course every child knows that salt on the tail does best of all! The sound of coins is very like a robin's call-note, and they will generally answer, thinking a friend is looking for them, and will hop near where the sound comes from, hunting about for some strange kind of robin.

Hitherto I have only told you about flower gardens, as most children would like to grow flowers best, with perhaps one fruit tree for the fun of eating the ripe fruit. But a small plot might be laid out as a kitchen instead of a flower garden, and afford a great deal of pleasure and work. But there is perhaps greater disappointment in the failure to produce vegetables, as not only is there the sorrow of seeing the plants die or dwindle away if they do not flourish, but there is the regret of not being able to eat them too.

In growing vegetables you must look far ahead, in the same way as with flowers, so as to have them ready when they are wanted. Their seeds have to be sown in just the same way, and thinned out to allow room for the plants to grow, and pricked out in rows when they are large enough to handle. It would be very difficult for any child to keep a succession of vegetables. Some would have to be sown every month in the year. For instance, to have a supply of lettuce, seeds should be put in at intervals from January till July, and then again in August and September for the late autumn and winter crops. But to have just enough for good summer salads, sowing in March and then again in April, and perhaps once in May, would be enough. With peas, beans, cabbages, and most vegetables there is the same difficulty—a number of sowings must be made to have a regular supply, but in a very small garden one or two sowings would be enough, so as to have just a few vegetables at each time of year.

Peas and beans could be put in early in the spring to fruit in the summer. Then in March or April some cauliflower seed could be sown, which would be ready for eating in August or September. In May some broccoli and Brussels sprouts could go in for late autumn

and winter use. May or June is the time to sow celery, and that would have to be planted in trenches about August and banked up to blanch it in October. In August a few cabbages could be sown, in September radishes for winter use. Thus in a small garden it might be possible to have a few vegetables all the year, but it would be difficult work for children, although very interesting, and they would have to be prepared for failures.

There are three vegetables I must not omit to mention, as they have given me so much pleasure. The easiest of all is mustard and cress. It will grow almost anywhere, and rarely disappoints, and can be planted in all sorts of fanciful patterns or letters. When I was a very small child I sowed the name of one of my sisters in mustard and cress as a surprise for her birthday. The seeds were put in about ten days before, and the salad was nice and green by the required day in September, when all the birthday party were invited to my garden to see it; but alas! it was discovered that I had misspelt the word, and there was my fault only too plainly visible in green lines on the brown earth, which no sponge or indiarubber could efface. There was nothing for it but to eat the offending letter first! Imagine my confusion,

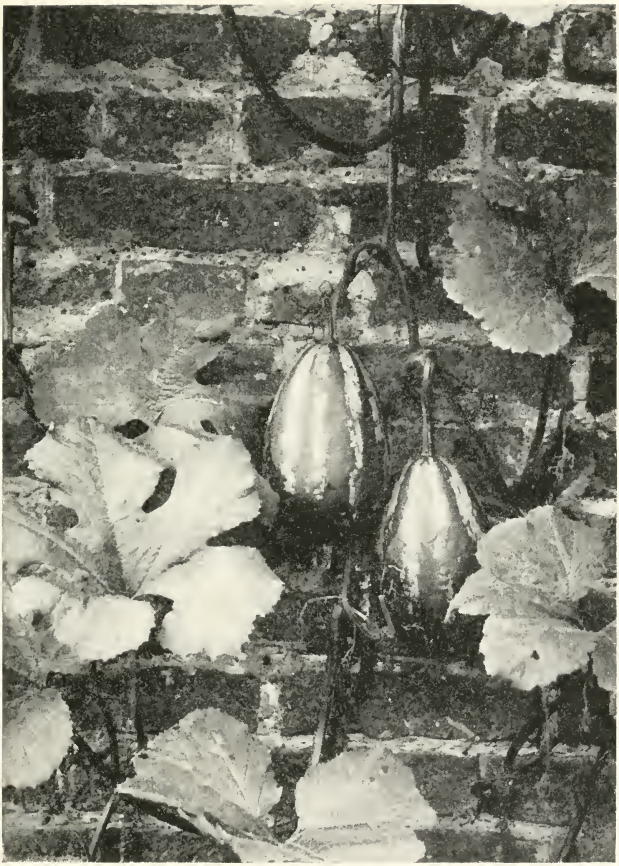
and mind, children, you are more careful when you try such experiments.

Another failure I would warn you against occurred with artichokes. The artichoke is a kind of thistle, and if left long enough comes to a large purple flower. The first year I grew them the head was not picked until the purple began to show. By that time it is all a "choke," or fluffy flower, and great was my disappointment, when I brought it into the house to be cooked, to find there was nothing left to eat. They must be cut as young buds, unless they are only grown for ornament. They are perennial plants, and it is better not to trouble to sow the seed, but to get a few offsets from large old plants. Put them in about March, and they would be ready to cut in August or September the first year, but earlier still the second year. Like other herbaceous plants, they would have to be cut down when they have done flowering in the autumn, and in cold seasons protected with ferns or litter.

There is only one more vegetable I am going to tell you about, and that is the potato. Some children might find more delight in growing them than in all their lovely flowers. It would be a pity to give up a pretty little garden for their culture, but there is sometimes

a waste corner that you might be allowed to trench; even a very tiny corner will grow a good quantity. They have to be planted in the spring, and it is the "eyes" or spots, which are really sprouts, that are put into the ground. If you can get a few potatoes you can cut them into pieces, containing two or three eyes, or even one eye if you have not got many. All the summer you will only have to keep them weeded, and when the tops die down at the end of October or beginning of November, clear away the rubbish and then dig the plants up with a fork, and for each eye you have put into the ground, you may get quite a nice lot of large potatoes. I used to have very successful crops.

Near my garden there were large heaps of the leaves that had been swept up in the autumn. They were left there until the leaves were decayed and had become good leaf-mould soil. Such heaps are very necessary, but they did not look very beautiful, so I asked if I might make them look better by planting some vegetable marrows on them. As it did the heaps no harm, I was allowed to; and very fine marrows I had. I then tried pumpkins, and various kinds of ornamental gourds. One hot summer I grew some fine bottles on a "bottle gourd," and the pumpkins were a great success. I had



ORNAMENTAL GOURDS

many which were far too large for me to lift, weighing two or three stone, and one great triumph was a giant of seven and a half stone, which must have been the kind that Cinderella's fairy godmother turned into a coach.[1]

If gourds or pumpkins are grown they must be cut before any frost injures them, or they will soon spoil. If they are gathered before the cold nights at the end of September, and stored in a dry place, they will keep for some time, even till Christmas, if they are not bruised at all.

I have now written enough to show you what a very busy season autumn is. First the cuttings to take, and seeds to collect, next the bulbs to be planted, and all the herbaceous plants to be attended to, and then a general tidying up all round. Besides this regular work, countless little jobs will be found necessary from week to week as the season wears on, and the short days of winter approach.

The gardener will find the autumn months none to long to finish everything that has to be done, and must work hard so that all should be prepared before winter. The garden must be

[1] The seeds of this pumpkin were those of the "Potiron rouge," and were bought at Vilmorin, Quai de la Mégisserie, Paris.

quite neat and tidy, so that the snow may lie smooth and pure when the year draws to its close and the garden is wrapped in a shining white blanket during its long winter sleep.

VI

WINTER

In fretwork of frost and spangle of snow,
Unto his end the year doth wend.

EDWIN ARNOLD.

WATTLED SUMMER HOUSE
Built almost entirely by two children

WINTER

THE melancholy days are come, "the saddest of the year"; and what a contrast to the glories of summer or the wealth of autumn are these cold, dark days of winter. The flowers are dead, the trees are bare, the winds are sighing, and the year is dying. The garden looks forsaken, and all nature seems asleep. It is then we are grateful to every green leaf—the glossy ivy, shining laurels, and sombre yews, all are welcome now. We wander round the garden, too cold to linger unless we find some work to be done, and even for busy hands there is not

much employment out of doors. After a night of howling wind there may be some poor creeper to fasten up, or broken sticks and branches to clear away. Then comes sooner or later a clear, still evening when the sun sets like a ball of fire, and we know that "Jack Frost," who has only peeped at the garden during the night hitherto, has come to make a stay. If your tender plants have not had shelter before they must have it then. Anything you can collect—dead leaves, dry bracken, fir branches, straw, or whatever has been prepared as a winter coat—must now be put on without delay, and might be enough to save a plant which would otherwise perish in the night.

Next morning the world seems changed to fairyland. Every branch, every blade of grass, is decked with a myriad white crystals, sparkling with all the colours of the rainbow, and the pond looks deep and still with its shining surface of clear, dark ice. It is a world of such beauty that no art can excel or even approach it. But I must confess to you, children, that I, as a child, with my little sisters, used to try to reproduce in miniature one of those lovely frosted trees. The Christmas holidays were just the time for such experiments, and we imagined a small branch of a tree was a good

imitation of the glittering world outside, if every twig was carefully wrapped round with white flannel, and steeped in a strong solution of boiled alum, until it was covered with crystals. Since those childish days I have seen "asparagus fern" dipped in the same solution with charming effect.

This clear frosty weather is very pleasant, but it is more trying to the plants than if they first have a warm blanket of snow. When leaden clouds collect, down come the snowflakes, and we say that old Mother Goose is plucking her geese. They look and feel so cold, yet they really keep the plants cosy and snug and hidden away from the cruel hand of "Jack Frost." The garden should have been made all tidy before the fall comes. All dead stalks should be cut off and leaves swept up, and then the snow will lie clean and white.

If the ground assigned to children is quite unprepared, some digging could be done during the winter months when the weather is open. Everything will grow much better if the ground is thoroughly well dug before plants are put in. Children's gardens are often under trees, and the roots are a great trouble and make the ground very hard at first; but all the soil must be turned up and well loosened if anything is to be made to grow. Among the lists I have

given, you will find several flowers that do not mind the shade, such as cyclamen, London pride, hepaticas, *Omphalodes verna*, and martagon lilies; and there are others—Solomon's seal, *Trillium*, periwinkle, lilies of the valley, foam flower or Tiarella, *Polemonium* or Jacob's

LILIES OF THE VALLEY AND FOAM FLOWER

ladder—all of which will grow under trees. In very dark places, where flowers would not bloom well, ferns might be grown. The winter could be spent in getting a place ready, and the ferns be planted in the spring. Try and collect a few large stones and bits of old roots and some good leaf mould from the nearest wood, mix up well with the soil, and arrange

nice little holes and corners for the ferns among the stones and roots, and fill them up with the good earth. There are numbers of common ferns you might try to grow. The "Male fern" and the "Lady fern" polypody, harts'-tongue, hard fern or blechnum, spleenwort and ceterach, oak and beech, and among the rarer ones, the holly and ostrich feather ferns, and green spleenwort, *Asplenium viridi*, that has a green instead of a black "back bone" up each frond, and one of the bladder ferns, *Cystopteris fragilis*. A very fine one is the royal fern *Osmunda regalis*, but it requires water. A pretty one, easy to grow and uncommon, is the American maiden hair *Adiantum pedatum*.

When there is no special work to be done among the plants, and all leaves are removed and delicate treasures protected, there is frequently an interval which could profitably be devoted to making a garden-seat or some sort of little tool or summer-house. If children can get some strong pieces of wood for the four legs, and a board for the seat, they can very often manage to collect bits of wood and find sufficient material to make a rustic back and arms to it; or if the sticks are strong enough, they can even manufacture the seat itself out of the rustic pieces twisted and nailed together. A more ambitious work would be a tool or

summer-house, and the most simple kind for children to attempt is one made of posts of wood wattled together. The house could be only big enough to hold spades, rakes, and hoes, and—if you possess such a treasure—a wheelbarrow, or it might be so high as to enable a child to stand upright inside. The way to begin is to get four good stout poles for the four corners, then put between them thinner posts of wood, and afterwards get long pieces of willow or osier and twist them from one big post to the next, in and out of the thinner posts, in the same way as wicker or osier baskets and hampers are made. Osiers can be bought in bundles in most parts of England for a few pence. This work requires no big nails or sawing up of wood, and yet is very durable. The roof is the most difficult part, but it can be made fairly rain-proof with pieces of stick and wattle like the walls, and straw or, preferably, heather woven in. It can be wattled on the ground in one piece to make a flat roof, or two pieces to make a pitched roof. It can then be put up and bound on to the walls with osiers. The addition of some sort of thatch, such as straw or heather, stuck into the osiers will make it more water-tight.

When everything is covered with snow, it is

certain that no work can be done in the garden, but you may perhaps have a few plants in the house to tend through the winter. If so they must be given as much light and air as possible, and children should be careful not to keep them very hot during the day, while the fires are burning brightly, and not to leave them near the window in a room which will get very much colder during the night. I was very disappointed once with one of those pretty "Japanese lilies," or "joss flowers." The bulb was placed on a few stones in a little china bowl kept full of water, and it grew beautifully, threw out roots, which clung round the stones, and long green leaves and flowering stalks. I had grown it in my bedroom, where it was fairly cool in the day, but never got very cold at night, until one day when the buds were very nearly out, and its narcissus-like flowers would be open in about two days, I was so proud of it that I carried my plant down to the drawing-room that it might be more seen. It was a large room, facing south, and all day my lily stood on a marble slab near the window, the sun warm on one side and the blazing fire on the other. Sad to relate, I left it there all night, through ignorance, not carelessness. During the night the fire burnt out, the room grew cold, the large window-panes

ROYAL FERN

Osmunda regalis

were frosted, and in the morning I found my treasure with shrivelled, limp-looking buds, which never opened. I can remember my grief still. But the lesson was learnt, never to be forgotten. I recollect my successes too; and conspicuous among them I recall the two bulbs of the "Emperor" daffodil that had been given to me, which reared their proud golden heads and brightened my room during the last days of January.

Winter is a good time for reading, and some of the hours you devote to it during the Christmas holidays might be given up to books about gardens and flowers. You would be adding something to your store of knowledge which would be sure to come in useful in the spring when work out of doors began again. You could read about beautiful gardens and the flowers in them, and stories about bird and insect life, or it would add very much to the appreciation of a garden to have even a slight knowledge of botany. If you studied it just a little during the winter months, you could then understand some of the shapes and forms of flowers and leaves, and realise much better how they grow and what they require to make them flourish. Much of this can be learned by observation, but reading or teaching would direct your eyes, and make them notice many

beauties which would otherwise escape them. I will only tell you just a few things that botany teaches, and feel sure you would not rest content with such crumbs of knowledge, but would try and get hold of the whole loaf. This science includes all the wonders of the vegetable kingdom, not only of flowering plants, but all about ferns and mosses, fungi, and sea-weeds too. It tells us how to classify or group plants together. Long, long ago botanists classed flowers in a way which now seems very ridiculous, as scientists have learned so much more. They used to put together those that were most like each other outwardly, or made distinctions according to the shapes, colour, size, or medical properties, while now real and important likenesses are found between plants which at first sight appear to differ, and these are grouped together in what are called families, or natural orders. Such a family as this is that called *Ranunculaceæ*, to which buttercups, anemones, clematis or travellers' joy, Christmas roses, and the great aconite or monkshood belong, although unless they are carefully studied they appear so different.

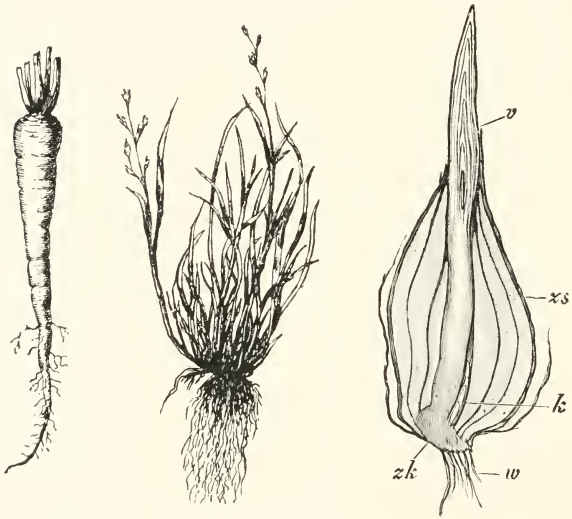
This system of what is called "natural classification" was not found out quickly or easily, but was the result of centuries of patient study. Other arrangements were made by

well-known botanists, such as Ray (1628-1705), Tournefort, and others; then came the great Swede, Linnæus (1707-1778), who founded a system which for many years was the one in use. But after a time this was further improved upon by Jussieu (born at Lyons in 1748), and then by de Candolle (born at Geneva in 1778), and introduced into England and settled into "natural classification," as it is now used, by Bentham, Hooker, Darwin, and other great botanists.

All the organs or parts of a plant deserve careful study. There are two classes of these organs: those which are called "reproductive," or all the parts which make up the flower and form the seed or fruit; and those which are called "nutritive," or the root, stem, and leaves, by which the plant lives and gets nourishment. These organs are very varied in form, and the plants which have one or more of them alike are grouped together. To learn all the long names by which these classes are distinguished, it is necessary to study a book on botany, but even without making a special study children would do well to try and notice the structure of the plants they cultivate.

First notice the roots; some have what is called a tap-root, a long straight root with fine fibres like hairs branching off from it, and

sometimes this tap-root is thickened, as it is in the case of carrots or beetroot. Or secondly, a plant has what is called a fibrous root, like a collection of hairs or threads. Any tuft of grass has this kind of root, as it is easy to see



ROOT OF A RADISH

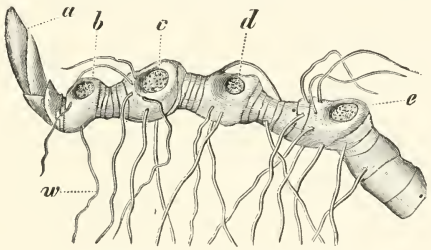
ROOTS OF GRASS

SECTION OF A TULIP BULB

zk, modified stem; *xs*, scale leaves; *v*, terminal bud; *k*, young bud; *w*, roots.

by pulling up a few blades. A third kind of root is thick and fleshy, and is called a tuber. A good example of this kind is the dahlia. These tubers are stores for the nourishment of the plants. Then children should notice bulbs, which are not roots in the same sense as those

already quoted, as can be seen by growing a hyacinth in a glass of water. The true roots soon begin to grow and fill the glass. Potatoes are not really the roots of the plant, although they are dug up from the ground. The fine fibres are the roots, the part that is eaten being really a thickened stem. The marks called "eyes" often sprout if the potatoes are stored in a damp, dark place, and show they



RHIZOME OF SOLOMON'S SEAL

a, bud of next year's growth; *b*, *c*, *d*, *e*, scars from former years' growth; *w*, roots.

are really like leaf-shoots. In some plants parts of the stem called "rhizomes" creep along underground, and the small fibrous roots are thrown out from them, which go deeper into the ground, while fresh leaves shoot out and grow upwards from the rhizomes. The lily of the valley is a plant of this kind. Bamboos behave in the same way. The straight canes which are used as walking-sticks and umbrella handles are the stems which grow upwards; the knotted or twisted parts which

form the handles, or sometimes even the whole stick, and have knots and joints close together, are really part of the rhizomes or underground stems.

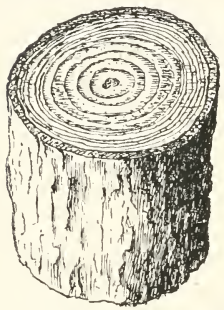
All the different kinds of roots—the fine hair-like fibres and the straight tap-root where it exists—are of the greatest importance, as through them the rest of the plant draws out of the soil all the good properties by which it lives. In very hot countries, where there is a rainy season and then a long period of drought, plants have very large bulbs, so as to store moisture to keep them alive during the dry months. The nourishment they get through their roots is as necessary to plants as food is to animals, so in putting them into the ground every care should be taken not to break or bruise the roots, or when lifting not to cut the roots with the spade. One must dig a little distance from the plant, or loosen the soil and raise it gently with a fork, and in replanting spread out the fibres carefully, or make a deep enough hole to take the long tap-root or tubers. The plant thus tenderly taken care of will well repay any extra trouble by growing proportionately better.

As the roots are constantly getting nourishment out of the soil, in time they want more than the ground can supply them with, and

that is why manure is given to plants, and this is also why different crops are planted year after year in one field, and not always the same crop. In a natural state various things help to enrich the soil—the rain and snow give moisture, and the dead leaves which fall in autumn decay and help to renew the soil; but in a garden, where plants of many kinds are placed near each other in a way in which they would never be found growing in a wild state, and where all the dead leaves are carefully swept up, these wants of the plant for fresh food must be supplied by the gardener.

The next part to notice is the stem. The use of the stem is to carry the nourishment absorbed by the roots to the different sections of the plant, and to serve as a support for the leaves and flowers. There is a great variety in stems—some are stiff and erect, others creeping or trailing, as the "runners" of a strawberry plant, some go on steadily increasing in size every year, others die down at the end of the year, as is the case with many garden flowers, such as larkspurs or phloxes, but all the varied forms have the same work to perform. If you notice a great forest tree that has been cut down, you will see a series of circles, beginning with a tiny one in the centre; and following one inside the other

until the bark is reached. One of these "rings," as they are called, is formed every year, a narrow one or a wide one, according as the season is dry or moist, and so, by counting them, you can tell the age of the tree.



A PIECE OF THE STEM OF A LIME TREE, SHOWING ANNUAL RINGS.

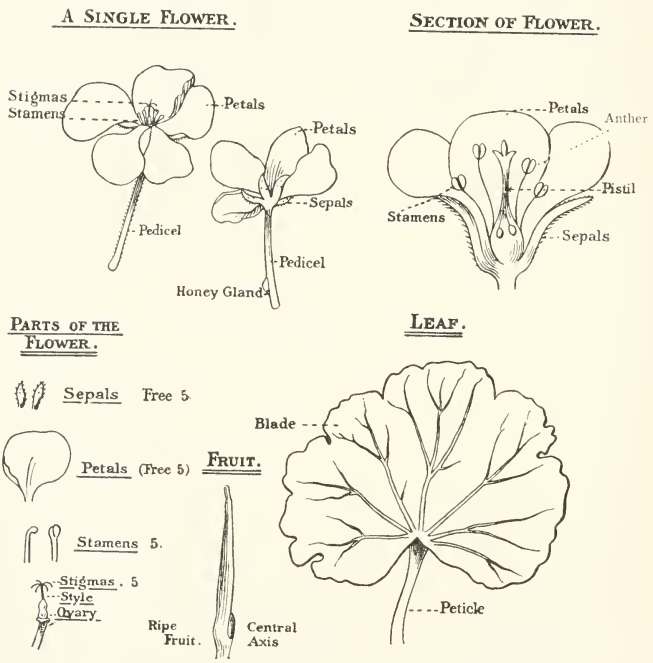
Still more pretty and interesting are the shapes and forms assumed by leaves, the last of the "nutritive" organs to be considered, but they too are all busily performing the same functions, and help to keep the plant alive and well. Not only are leaves useful to plants, but the work they do is essential for human beings. The leaves absorb from the air what is called "carbonic acid gas" or "carbon dioxide," which is poisonous for people to breathe, and they give off oxygen, which people require. This is why green trees and growing plants are so good and useful in crowded towns, as they not only give shade and are pleasant to look at, but they are really helping to improve the air for human beings and animals. The leaves are generally spread out from the stem, so as to have every opportunity of getting both air and light. Light is necessary to keep

leaves green. The green is actually made by a chemical process set up by light on a certain property that the leaves contain, called "chlorophyll." This is easily proved by looking at plants grown in the dark. The sprouts that grow from a potato "eye" in the dark are a sickly yellow, and lettuces are tied up so that the inner leaves do not get the light and look pale and white. The immense variety in the shapes of leaves is very interesting to study. They are all described in botany by long names, but even before the names have been learnt it is well worth while to collect and notice some of the many forms. Compare, for instance, an oak, an ash, and a lime leaf; a rose, a violet, or a nasturtium; a wallflower, daisy, or ivy—the leaves arranged in tufts as on the pine trees, or having tendrils as sweet-peas, and hosts of other forms and shapes which are all specially adapted to the uses of the particular plant.

The flower belongs to the other section of organs, called reproductive, as all the parts of a flower have to do with the production of seed or fruit. The essential parts for making seeds are what are called stamens and pistils, which generally look like more or less thick threads coming out of the centre of a flower, the stamens having thickened ends with

yellowish dust on them, the pistil being the stiffer-looking spike in the middle of them.

The Scarlet Geranium.



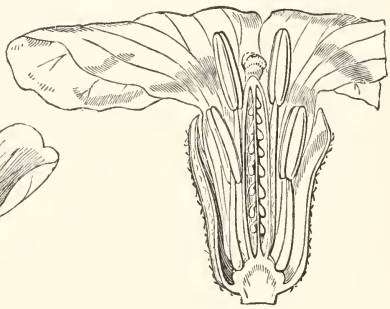
The coloured and showy parts of a flower are arranged so as to be of use to the parts that make the seeds. The easiest way to understand a flower is to look at the flowers them-

selves, and find each organ in turn, till you get accustomed to them. Take a scarlet garden geranium (called botanically a Pelargonium). Under the scarlet part there are some small green leaves called "sepals"; these form the "calyx"; in this case there are five. The scarlet part is called the "corolla," and is divided into what are called "petals," each of which can be pulled off separately. Having pulled off the petals, the stamens, five in number, are seen, grouped round the pistil. At the end of each stamen is a small lump; this is called the "anther." Through a magnifying glass it is clear that the anther is a little two-celled case, which contains the dust called "pollen"; these anthers burst open and let the "pollen" fall out. The pollen has to fall on the "stigma," as the end of the pistil is called, to cause the seed to develop. In a geranium the stigma has five curling ends; in other cases, either one or more curls or else some formation like a thickened lump. Inside the pistil there are divisions, which are called "carpels"; in the case of the geranium there are five of them, and these carpels contain the "ovules," which form into seeds when the pollen has fallen on to the stigma and passed down the straight part of the pistil, called the "style."

Every perfect flower has all these organs,

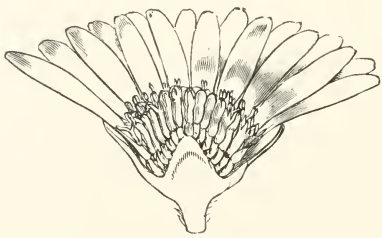
although they are very differently arranged in each class of plants. Take a wild or single rose, a wallflower, a buttercup, or a primrose,

ROSE



WALLFLOWER

and each part is easily found. In the roses the stamens are very numerous; in the wallflowers there are only four sepals and four



DAISY

petals. A buttercup has a great many "carpels." A primrose has the petals joined together and each cannot be pulled away

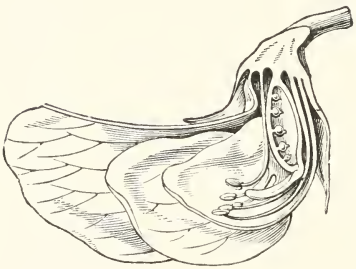
separately. Yet in every one of these flowers all four parts are easily found. In a daisy the arrangements are more complicated. It is what botanists call a composite flower. The white part is called the "ray" and the yellow the "disk." The disk is made up of a great

DAFFODIL

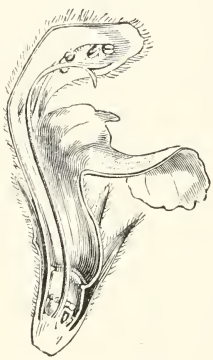
many "florets," each perfect and containing both stamens and pistil, The yellow flower of the common weed groundsel is similarly a collection of some sixty to eighty florets. In describing some flowers where the calyx and corolla are all bright-coloured, as in an iris, daffodil, or bluebell, they are together spoken of by botanists as a "perianth."

It would be impossible to describe every

type of flower; their variety is so great. A scientific botany book must be consulted to learn even a few of them, but it is a real pleasure to look at the flowers themselves. Notice a violet, a sweet-pea, a dead nettle, heather, dandelion, lily of the valley, foxglove, honeysuckle, and crocus, and some of the



GARDEN PEA

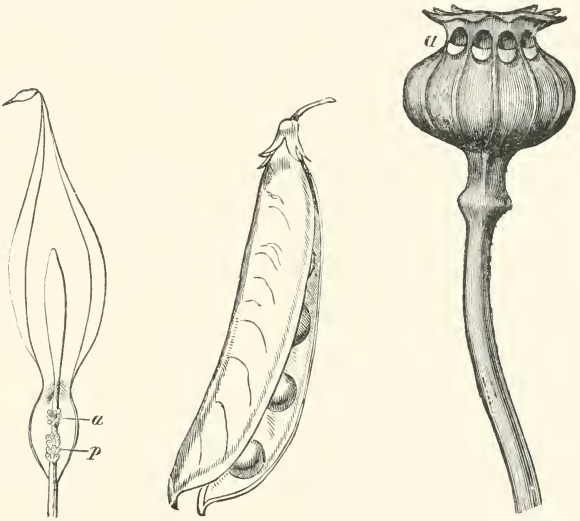


DEAD NETTLE

variations will become familiar to you; but there are a few imperfect flowers which would remain a puzzle without the book as guide. Take, for instance, the wild arum ("lords-and-ladies") or the pretty white arum grown in greenhouses. The real flowers are the stamens and pistils arranged in groups on the spike up the middle, while the green or white

showy part is really a sort of leaf, called a "spathe."

From what has been said about the number of carpels in the pistil, it must be clear that the shape and number of seeds must correspond



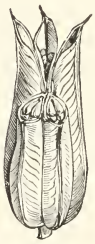
ARUM PEA POD POPPY

a, stamens; *p*, pistils.

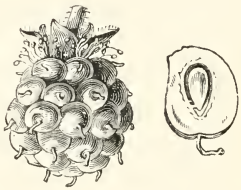
with the carpels, because the ovules in the carpels are the beginnings of the seeds. The differences in seeds and fruits are as fascinating to study as the forms of flowers. Look at a pea pod, a poppy seed-head, thistle-down, or dandelion, marigold, or sunflower, pansy or carna-

tion, columbine or foxglove seeds, and notice how different the arrangement and number of the seeds is in each case. The seed of some plants is surrounded by soft pulpy growth which is eatable, but the process to produce the seed is always just the same. In a peach or cherry there is a little mark or scar on the end, which shows where the "style" was ; the soft part is an

DANDELION



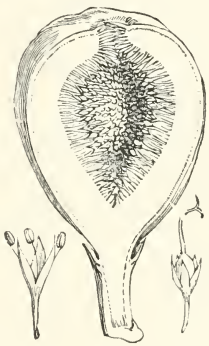
COLUMBINE



BLACKBERRY

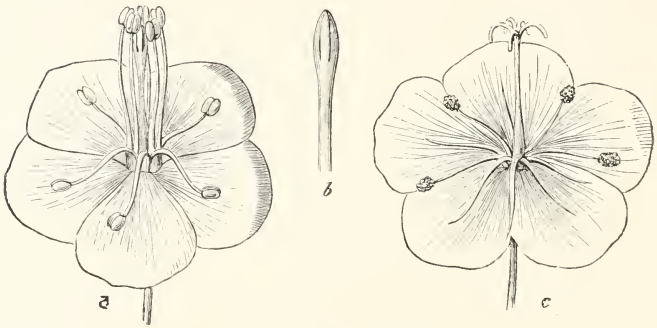
extra surrounding to the hard stone, inside of which is the real seed. These fruit-stones are so hard that they do not break open and let the seed fall out, as thinner seed-vessels do, but when planted the outside gradually rots away as the seed begins to germinate. An apple, orange, or gooseberry has several seeds collected in a soft and edible fruit, but the strawberry is different ; the little yellow spots are fruit carpels, each containing a seed, and they are arranged outside the soft red pulp, not

inside as in the gooseberry. Raspberries and blackberries are again slightly different, as in them each seed has a soft pulp round it, and the collection of these produces the fruit that is eaten. The fig is a very puzzling fruit till it is explained. Has it ever struck you that it is funny that although there may be a good crop of figs, the fig tree was apparently never covered with blossom like an apple, pear, or plum tree? The reason is that the fig is really like a bag full of flowers, which contain the germs of the seeds. If a green fig is cut open the inside is seen to be crowded with tiny, imperfect flowers, some having a pistil only, others stamens, and when a fig is ripe enough to eat these flowers have died, and seeds enclosed in a soft pulp have taken their place. These are only a very few of the various forms in which seeds are arranged; to describe collections of seeds like cones of a fir tree, or winged seeds like the "keys" on an ash, or spikes of grain like an ear of wheat, would take many pages, and does not much concern practical gardening. Before we leave the



FIG

subject of botany, however, there are a few words to be said about insects, as their visits to plants are so interesting to watch. It has been already explained that to produce the seed of a plant the pollen dust on the stamens must fall upon the style or stigma at the end of the pistil. This sounds very simple, but is not always so easily done, as frequently the



GERANIUM PRATENSE

a, young flower; *b*, closed stigmas in young flower; *c*, older flower stamens have retired and the stigmas are expanded.

pistil has withered before the anthers or pollen-bags have burst and let the dust fall out, or else they burst too soon, and the pistil is not ready for them. But nature has provided a way of ensuring the seeds developing, and employs insects for this purpose. The insect flies to a flower, gets its tiny legs and wings covered with pollen dust, then flies on, and resting in another flower, drops the pollen on the pistil

just at the right moment. If it were not for the visits of insects some plants would never have seed at all.

There is a still more complicated class of plants which have imperfect flowers, some

COLUMBINES

having pistils only, and others only stamens. In some cases both kinds of flowers grow on one plant, so that the insect has not far to go; but others have one kind of flower only, the other being on separate plant, so that an insect might have to carry the pollen quite a long way. As insects are so necessary to many

flowers, nature has arranged special attractions to bring the insects to them. In the first place, there is the bright colour of the flowers to draw their attention, then their sweet scent, and also the honey to be got from them. Long ago botanists did not understand how essential insects were to plants, and, knowing that everything in nature is designed for some special use, they were at a loss to account for the presence of honey in some flowers and not in others; but by careful study it has been proved that it is chiefly in flowers where insects are wanted that honey is found; so the busy bee not only provides his own winter store by his summer visits to flowers, but helps to form the seeds to grow for the next year. Some flowers are visited by insects which fly about at night, and they are usually not bright or dark-coloured, but white or pale, as the evening primrose, or the flowers are not attractive, but the scent is very strong, as in the night-scented stock. The honey is not always in exactly the same place in the flower. It is formed in what is called a small gland, sometimes at the base of the petal, as in a buttercup, sometimes at the end of the stamens, as in a wallflower, near the end of the pedicel or small stem that supports the flower in a scarlet geranium, or in some other part of a flower to which the insect finds its

way. Very often there are marks on the flower which attract the insects' notice, and direct them to the part where the honey is concealed.

These are only a very few examples of the wonders connected with plant life. The knowledge of such things is not essential to make a good gardener, for many very excellent ones know but little of the botanical structure or classification of plants ; but surely, having once read these few scraps of information, children will not be content until they know more.

When summer comes again and the garden is visited every day there will always be something to notice, and if there is not any striking change in some growing plant to attract attention, the field of botany and the wonders of insect life will furnish just as interesting a theme. The world of nature outside the garden—the woods, the lanes, the roadsides, or the river banks—will for ever be adding fresh items to the store of knowledge of any child who watches and notices and does not pass by the book of nature without trying to turn over and read its leaves. Many a lesson of great use in gardening can be learnt in the fields or where nature is untouched by art. The keener the efforts in gardening, the wider is the interest taken in all the beauties of the natural world ; and on the other hand, the

more complete the study of botanical life, the more will the love for everything in a garden increase.

The winter will have been well employed if it leaves you determined to watch your flowers more attentively, to study their wants more carefully—in fact, to make better friends with them and learn to know them and all their ways and peculiarities, and appreciate all the wonders of their growth and existence.

There is nothing else I can tell you to do in mid-winter when the snow is on the ground except to enjoy the Christmas tree in the house, and the red holly berries and the green mistletoe. But with the new year comes new life, and before the first month has passed away some plants will be peeping out. Christmas roses, which are often still in buds, hidden among their large dark-green leaves at Yuletide, open their pure white blooms as the days lengthen in January. Winter aconites seem to herald the spring long before warm days have really come, with their sunny golden flowers, each set in a natural frill of brilliant green. But the true child of winter is the snowdrop. It pierces its way through the cold hard ground, and with the first gleam of pale winter sunshine that softens the frost-bound earth it shakes out its dainty white and green

A GARDEN IN THE SNOW

bells. As the village chimes toll out the old year and ring in the new, so the snowdrops seem to sound a peal of welcome to the coming spring. Each season has its flower bell, so a pretty poem tells us. The lilies of the valley ring their tiny bells in spring, and louder chimes come from the joyous "bluebells" in summer, while myriads of heather-bells proclaim the coming of autumn :—

Ring the seasons round
With the joyful sound
  Of flower bells.
If we listen near,
Then we all shall hear
  What nature tells.

Lily bells will ring,
Welcoming the spring,
  Gentle and sweet.
Through the tender grass,
Softly as we pass,
  Chime at our feet.

Waving harebells blue,
Delicate of hue,
  Ring this refrain :
Summer's here at last,
Winter's gone and past,
  Summer again.

Then from the hills around
Comes forth another sound,
  A merry din ;

CHRISTMAS ROSES

And all the heather-bells,
Over the moorland fells,
Ring autumn in.

Autumn with golden sheaves,
Autumn with golden leaves,
Dying in state;
Ring, for the passing year,
In glory shining here,
Must yield to fate.

Then winter rules again,
With its long icy reign
Of war and strife;
But from beneath the snow
White tender snowdrops grow,
Bringing new life.

And nature seems to cry,
My pulses cannot die,
They cannot cease;
And all the snow-bells clear
Ring through the cold dead year,
Come hope and peace.

HON. SYBIL AMHERST, *Flower Chimes.*

Thus the seasons roll round, each one bringing its own charms, its own joys, and its own duties. Every child that tends a garden, no matter how small it may be, will watch the months with tenfold interest as the year passes from growth to decay, and back again to the dawn of new life and spring. Each successive

summer as it comes round should find the garden fairer and brighter. The plants slowly but surely will grow finer and larger. The garden which at first was nearly empty will soon need much care and attention, for fear that the plants, in growing strong and tall, should overcrowd or hurt each other. In time the creepers, which were but a few inches high when put in, will climb up over the trees. The bulbs will soon spread and increase, the roses will grow and flower profusely, and the apple tree will bear its load of tempting fruit. But before all this can be achieved the fairy bells must have rung their chimes for many seasons, and all the while children must be acquiring that virtue which I told you was the chief to be learnt from gardening—patience. Plants will not be hurried, but it is well worth waiting for them to reach perfection and see our toil rewarded.

A toadstool comes up in a night,
Learn the lesson little folk :—
An oak grows on a hundred years,
But then, it is an oak.

Now, children, we have gone all through the seasons together, and I have told you much more than you can possibly remember. Perhaps you are almost bewildered at the number of

names of flowers you feel you can never get, and are disheartened at the number of things you are told to do that you scarcely know where to begin. But all the comfort and advice I am going to give is to tell you just to try. Try to have even one plant in flower in each of the four seasons; then you will find in a little while you will be trying the next step, having one for every month. Try next to have one of each colour, red, blue, and yellow, in each of the summer months; then another year try to do the same in autumn and spring too. Try to do one of the pieces of work you have read about—first to dig, then to weed, then to sow seeds and plant cuttings.

Try each year to do something more, add to your garden little by little, and you will soon be surprised and pleased instead of being sad and disappointed. I have no fear of your success. It may encourage you to know that I began to work in my garden when I was so little I cannot now remember being without one. Every year my garden got improved, until by the time I was fifteen I had a great number of the flowers which have been described, and knew what work had to be done at each season of the year without having to look it up in a book. I feel sure you will find the same, that if you only try and begin, everything will come easily.

If you do have failures, as it is certain you will, remember they are the surest way of learning. So try, children, and I will wish you good luck and success, and trust that your gardens will give you as much pleasure and happiness all your lives as mine has done.

APPENDIX

A FEW words about the cost of flowers may be a help and guide to children. Naturally trouble must be taken to make pocket-money go as far as possible, and luckily even a few pence can brighten a garden. People are often very kind, and will give a child a cutting, a few seeds, or a piece off a big plant, which can well be spared from a larger garden. But without any such help, by a very small expense every year a great many of the plants mentioned in these pages can be got together in time.

Nearly all the annuals in the list on page 102 can be bought in packets for 1d., and many of the plants that live longer, such as pansies or sweet-williams, can also be raised from seed bought at the same price. The more choice or named varieties of annuals and many perennials are to be had in 3d. packets of seed.

Most of the rock plants—aubretias, campanulas, gentians, primulas, saxifrages, and such like—can be got for 6d. or 9d. each. The larger perennials—globe-flowers, red-hot pokers, spiræas, Michaelmas daisies, Japanese anemones, larkspurs, Christmas roses, and so on—cost from 6d. to 1s. each.

Special plants suggested for a wall, such as clematis, Japan quince, Virginian creeper, or blue passion-flower, cost 1s. each; honeysuckle could be got for 6d., white passion-flower or wistaria not under 1s. 6d., but mezereon for 1s.

Roses can, as a rule, be bought for 1s.; some at a lower price, such as China roses or *Rosa rugosa*, which are often only 6d. Of course new or special roses might be more expensive, but a very large number are sold at from 9d. to 1s. each. Some lilies are rather more costly; the cheapest and best to grow—the Madonna lilies—are about 3d. to 6d. each, and tiger lilies about 2d. each.

Carnation layers are 4d. to 6d. each. Anemones, ranunculus, montbretias, and Spanish iris cost 6d. to 9d. a dozen. Winter aconites, 4d. to 6d. a dozen. The spring flowering bulbs all vary in price, but there are cheap as well as very dear ones to be had of all kinds. The hyacinths are from 2d. to 4d. each. Tulips, daffodils, and poet's narcissus, from 6d. to 1s. a dozen. Special daffodils, such as Emperor, Empress, or Sir Watkin, 3d. each. Crocus, snowdrops, squills, triteleia, etc., are 4d. to 6d. the dozen. Crown Imperials, 6d. each; and cyclamen, 3d. to 6d. each.

A child's garden could in a short time have flowers at all seasons, by spending 1s. a year, if care and trouble were taken.

The first year 6d. could be devoted in the spring to buying 1d. packets of seed—for instance, sweet-pea, nasturtium, mignonette, nemophila, Shirley poppy, and pansy; and in the autumn a dozen

daffodils could be got for 6d. to flower the next spring.

The pansies would not die at the end of the summer, but should live through the winter and begin to flower earlier the next season. Seeds could be saved from most of the annuals, so only 3d. need be spent on seeds the second year. Any plant that would last, such as Michaelmas daisy, lark-spur, Oriental poppy, musk, or candytuft, and some biennial such as Canterbury bells or sweet-william, could be sown and grown on carefully through the summer to flower the third year. Another 1d. could be spent on some bright annual, such as godetia, eschscholtzia, or corn-cockles. And 8d. or 9d. would remain for spring bulbs—three hyacinths or a few crocus, for instance.

By the third year there should be a good many summer flowers in the garden. Pansies, a perennial plant, Canterbury bells or sweet-williams, sweet-peas, nasturtiums, mignonette, and poppies should all be there if the gardener has been successful. Exchanges even could be made with a friend—seeds of poppies in return for marigolds, or some seedling plant for a similar treasure, or one of the daffodil bulbs for a few snowdrops or winter aconites; in this way the stock would be increased. The whole shilling could then be spared for some big plant, such as a rose, Japan quince, clematis, mezereon, or Christmas rose. Two or three white lilies, or two Crown Imperials, a few gladiolus bulbs or iris, or some other perennial plant, could be got instead.

The fourth year the seeds of spring flowering

plants—polyanthus, wallflower, or forget-me-not—could be purchased, and with the rest of the money another rose, or something for autumn flowering, could be added to the collection.

Thus with care and forethought, and but little expense, in a few years a small garden could be kept gay throughout the year.

INDEX

Aconite (Monkshood), 92, 144
Aconite (winter), 38, 39, 198
Almond, 154
Alonsoa, 102
Alpines, 27, 45
Alstrœmeria, 92
Alum crystals, 171
Alyssum, 60
Ampelopsis Veitchi, 10, 106
Anemone, 47
Anemone (Japanese), 144
Annuals, 74, 77, 101, 104, 146, 152
Anther, 187, 194
Antirrhinum, 102
Apple (tree), 154; seed, 192
Apricot, 157
Aristolochia, 107
Artichoke, 161
Arum, 190
Ash keys, 193
Asters, 77
Aubretia, 48, 143
Auriculas, 33

Bamboos, 181
Beans, 159
Beds, 22, 24
Bees, 196
Bellis perennis, 56 (*see* Daisy)
Bergamot, 96
Biennials, 91
Bignonia radicans, 14
Birds, 80, 138, 157
Blackberries, 193
Blossom, 193
Bluebell, 42, 189, 200
Border, 19
Border, flowers suitable for a mixed, 92
Botanists, 178, 179, 196
Botany, 177, 178, 197
Box, edging, 70
Boxes, planting in, 74
Bracken, 135, 170
Bramble, 157
Broccoli, 159
Brussels sprouts, 159
Budding roses, 125, 152
Bulbs, 27, 39, 66, 89, 111, 147, 150, 151, 164, 180, 182
Bushes, planting of, 151, 152
Buttercup, 188, 196
Butterflies, 144

Cabbage, 159, 160
Calceolarias, 78, 135
Calyx, 187, 189
Campanula, 79, 89, 91, 92, 99, 102
Canary creeper, 147
Candytuft, 100
Cape bulbs, 54
Carbonic acid gas, 184
Carnation, 88, 135, 191
Carpels, 187, 188, 191, 192
Cauliflower, 159
Celery, 160
Centaurea, 102
Cherries, 157, 192
Cherries (winter), 147

Chimonanthus fragrans, 10
Chionodoxa, 43
Chlorophyll, 185
Christmas roses, 198
Chrysanthemum, 102, 135, 145
Clarkia, 102
Classification, 178, 197
Clematis, 11, 12, 14, 107
Climbers, 10, 27, 28, 72, 106, 120, 152
Colchicum, 147
Colour of flowers, 196
Columbine, 74, 192
Composite flowers, 189
Convolvulus, 77, 102, 105, 146
Coreopsis, 102, 147
Corn-cockles, 77, 102
Corolla, 187, 189
Cosmos, 102
Cost of plants, 207 (Appendix)
Cotoneaster, 16
Cowslips, 51, 60
Creepers (*see* Climbers)
Cress (*see* Mustard and Cress)
Crocus, 150, 190
Crocus, autumn, 147
Crown Imperial, 55
Currants (red), 157
Cutting back bushes, 72
Cuttings, 73, 78, 123, 135, 164
Cuttings, how to take, 137
Cyclamen, 28, 146, 173

Daffodil, 56, 150, 177, 189
Dahlias, 73
Daisy, 56, 108, 128
Dandelion, 190, 191
Daphne cneorum, 56
Daphne mezereum, 11
Delphinium, 94 (*see* Larkspur)
Dianthus, 100, 102
Dibble, 75
Dictamus, 94
Digging, 30, 171, 204
Digitalis, 102 (*see* Foxglove)
Disk of composite flowers, 189
Division of plants, 141
Doronicum, 60
Dutchman's pipe, 107
Dwarf plants, 99, 146

Edging for beds, 23, 70
Eranthis hyemalis, 39 (*see* Aconite, winter)
Erica Carnea, 56
Eryngium, 94
Escallonia macrantha, 12, 15
Eschscholtzia, 102, 147
Evening Primrose, 96, 142
Evergreens, when to cut, 72
Everlastings, 103, 147
Eyes (of potato), 185

Ferns, 28, 172, 173
Fig, 193
Fir cones, 193
Flax, 77, 96, 100, 103
Floral clocks, 128
Florets, 189
Flowering in autumn, 143
Flowering shrubs, 137
Flowers in pots, 89
Flowers, structure of, 185-190, 193
Foam flower, 172
Forget-me-not, 47, 172
Forget-me-not, creeping, 46
Formal garden, 20-25
Forsythia, 10
Foxglove, 91, 102, 190, 192
Frame, 77, 135
French Honeysuckle, 91
Fritillary, 54
Frost, 170, 171
Fruit, 155-157, 191-193
Funkia, 94
Fuchsia, 137

Galanthus, 40 (*see* Snowdrop)
Galega, 94
Garden, different kinds of, 8
Garden seat, 173
Garden, wild, 25
Gentian, 45
Gentiana acaulis, 46
Geranium, 87, 187, 196
Geum, 100
Gladiolus, 105, 147
Glass frame (*see* Frame)
Gloire de Dijon, 14
Glory of the Snow, 43
Godetia, 78, 102, 147

Gooseberry, 192
Gourds, 162, 163
Grain, 193
Grass, 27, 180
Ground elder, 31, 69
Groundsel, 69, 189
Gypsophila, 94

Half-hardy plants, 87
Hardy perennials, 92-99
Harebell, 99, 200
Heath, 56
Heather, 190, 200
Helenium, 145
Helianthus, 94, 95, 103
Helichrysum, 103
Hemerocallis, 96
Hepatica, 48, 172
Herbaceous plants, 141, 152, 164
Herbaceous plants, list of, 92
Heuchera, 100
Hoe, 88, 174
Hollyhocks, 145
Homeria, 54
Honesty, 91
Honey, 196, 197
Honeysuckle, 13, 15, 107, 190
Hop, 106
Hose-in-Hose, 57
Hot-bed, 77, 78
Humulus, 106 (*see* Hop)
Hyacinth, 42, 43, 50, 89, 150, 151
Hyacinthus candicans, 147
Hypericum, 96

Iberis, 100, 103
Indian pinks, 77, 102
Insects, 33, 194-197
Iris, 43, 189
Ixia, 54

Jacob's ladder, 172
Japanese anemone, 144
Jasmine, 10, 107
Joss flowers, 175

Kerria japonica, 13
Kitchen garden, 158
Kniphofia, 99, 144 (*see* Red-hot poker)

Larkspur, 73, 79, 94, 183
Lathyrus, 103 (*see* Sweet-pea)
Latin names, 40
Lavender, 137
Layering, 89, 135
Leaf mould, 7, 31, 162, 172
Leaves, 179, 184, 185
Leaves (dead), 153, 162, 170, 183
Lent lilies, 58
Leopard's bane, 60
Lettuce, 159
Leucojum, 42
Lilies, 107-113
Lilies, japanese, 110
Lilies, list of, 111-113
Lilies, Martagon, 172
Lilies of the Valley, 28, 89, 172, 181, 190
Lilium candidum, 110
Linaria, 96, 100
Linum, 96, 100, 103
Lithospermum, 100
Lobelia, 79, 146
London Pride, 172
Lords and Ladies, 190
Low-growing plants (*see* Dwarf-plants)
Lupin, 74
Lychnis, 96

Manure, 7, 78, 143, 182
Marigold, 77, 104, 138, 147, 191
Martagon Lilies, 172
Marvel of Peru, 104
Mats for protection, 16, 17
Mattiola, 103 (*see* Stocks)
Meanings of flowers, 108, 114
Medlar, 154
Michaelmas daisy, 141, 145
Mignonette, 74, 79, 103, 138
Mimulus, 100
Monarda, 96
Monkshood, 92, 144
Montbretia, 104
Muscari, 43
Musk, 100
Mustard and Cress, 160
Myosotis, 47
Myrtle, 137

Narcissus, 57, 59, 89, 151
Nasturtium, 77, 79, 104, 106, 138
Nemesia, 103
Nemophila, 77, 79, 103
Nettle, 69
Nettle (dead), 190
Nigella, 103
Nutritive organs, 179-184

Œnothera, 96, 142
Omphalodes verna, 46, 172
Orange, seed of, 192
Osmunda regalis, 173, 176
Ovules, 187
Oxalis, 100
Oxygen, 184

Pansies, 32, 108, 135, 191
Papaver, 96, 103
Parkinson, 51, 104
Passion-flower, 14
Pea, 159
Pea (pod), 191
Peach, 157, 192
Pear, 193
Pedicel, 196
Pegging down, 20, 88
Pelargonium, 187
Pentstemon, 97, 135
Peony, 96, 141
Perennial plants, 39, 74, 141, 152
Perennial plants, list of low-growing, 99
Perennial plants, list of tall, 92
Perianth, 189
Periwinkle, 172
Petals, 187, 196
Phlomis, 93, 97
Phlox, 77, 97, 100, 103, 141, 183
Phlox Drummondi, 147
Physalis, 147 (*see* Winter Cherry)
Pinks, 88, 100, 102
Pistils, 185-191, 193-195
Plans of gardens, 19, 30
Planting, 19, 151
Planting out, 73
Plants, indoor, 89, 151, 175
Plums, 157, 193
Polemonium, 172
Pollen, 33, 187, 194, 195
Polyanthus, 50
Poppy, 77, 96, 103, 138, 191
Poppy, horned yellow, 31
Poppy, Oriental, 74, 94, 96
Portulacca, 80, 103
Potato, 161, 162, 181, 185
Potentilla, 97
Preparation for summer, 66
Preparation of ground, 31
Price of plants, 207 (Appendix)
Pricking out, 75
Primrose, 28, 50, 51, 59, 188
Primrose (evening), 96
Propagating plants, ways of, 137
Protection of plants, 17, 135, 153 170
Pruning, 72
Pumpkins, 162, 163
Pyracantha, 16
Pyrethrum, 97
Pyrus Japonica, 11

Queen Victoria, Garden laid out by, 25
Quince, 154
Quince (Japanese), 11

Radishes, 160
Ramondia, 100
Ranunculus, 97
Raspberries, 193
Ray of composite flowers, 189
Re-digging of beds, 143
Red-hot pokers, 99, 144
Remedies against birds, 77
Remedies against mice, 76
Remedies against slugs, 140
Reproductive organs, 179, 185
Reseda, 103 (*see* Mignonette)
Rhizomes, 181, 182
Rhodanthe, 103
Rock cress, 48
Rock work, 27, 172
Roots, 179-183
Rosa rugosa, 28, 128
Rosemary, 16, 108, 137
Roses, 13, 72, 114-128, 152, 188
Roses, China, 13
Roses, list of, 119
Roses, monthly, 13

Rose trees, planting, 151
Rudbeckia, 97
Runners, 183

Saffron, 147
Salpiglossis, 104
Sand, 7, 31, 110
Saponaria, 152
Saxifraga, 56, 71, 100
Saxifraga hypnoides, 29
Scent (of flowers), 192
Scilla, 42
Sea-thrift, 31
Sedum, 101
Sedum spectabile, 144
Seedlings, 87
Seeds, 74, 76, 78, 87, 89, 128, 138, 140, 152, 164
Seeds, construction of, 187, 191-195
Seed packets, 139
Sempervivum, 101
Sepals, 187
Shade, 7, 2, 172
Shade-loving plants, 28, 172
Siberian squill, 42
Silene, 146, 152
Slugs, 33 (*see* Remedies against)
Snap-dragon, 102
Snow, 138, 171
Snowdrops, 38-41, 150, 198
Snowflake, 42
Soil, 7, 30, 135, 172
Solomon's seal, 172
Southernwood, 137
Sowing, 74, 78, 80, 91, 204
Spade, 30, 174
Sparaxis, 54
Spathe, 191
Spirea, 93, 97
Spring flowers, 38, 152
Squill, 42, 150
Stakes, 152
Stamens, 185-190, 193, 195, 196
Starflower, 45
Stem, 17, 183, 184
Sternbergia lutea, 147
Sticks, 80, 87, 103
Stigma, 187
Stocks, 77, 91, 103, 196
Straw, 170
Strawberry, 19, 155, 192
Structure of plants, 179-197
Style, 187, 192
Summer house, 173, 174
Sunflower, 76, 77, 87, 94, 103, 138, 191
Sweet-peas, 77, 79, 87, 102, 106, 190
Sweet-william, 91
Symphiandra, 101

Tagetes, 104
Thalictrum, 99
Thinning out, 75
Thistle-down, 191
Thymus, Thyme, 101
Tiarella, 172
Tidying-up, 152
Time of day by flowers, 128
Tool House, 173
Top dressing, 143
Tree, age of, 184
Trilliums, 172
Triteleia, 45
Tritomas, 99 (*see* Red-hot poker)
Trollius, 99
Tropæolum, 104, 105 (*see* Nasturtium)
Tropæolum speciosum, 15
Tuber, 180
Tulip, 52, 150, 151
Tying up, 20, 72

Vegetables, 158-162
Vegetable Marrow, 162-164
Verbena, 147
Verbena, sweet-scented, 16, 135
Veronica, 101, 135
Vine, 106
Viola, 135
Violets, 49, 190
Virginia creeper, 10, 15, 28, 106
Vitis, 106

Wall, 9, 14, 19, 105
Wallflower, 66, 188, 196
Watering, 75, 80, 88
Weeding, 68, 88
Weeds, 31, 67, 204
Weigelias, 137

Wheat, 193
Wild garden, 25-32, 92
Wineberry (Japanese), 157
Winter Aconite, 38, 39, 198
Winter cherry, 147
Wistaria sinensis, 12

Zinnia, 104, 147

THE END

Printed by R. & R. Clark, Limited, *Edinburgh.*